

ABSTRACTS

32nd EDTNA/ERCA Conference

European Dialysis and Transplant Nurses Association
European Renal Care Association

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Abstracts

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Acknowledgement

We would like to acknowledge Cordelia Ashwanden as the Scientific Programme Co-ordinator in preparing the Abstract Book.

Foreword

Dear Friends and Colleagues,

Welcome to the 32nd Conference of the EDTNA/ERCA. Once again the aim of this Conference is to further the progress of renal care through the presentation of papers and the discussions both formal and informal which occur during the Conference between the members of the multi-professional health care teams.

This Conference will again be offering the Pre-Conference Workshops from the Research Board and the Transplant Special Interest Group, as well as the popular interactive sessions. The evaluation of the workshops showed again how relevant they were last year so I hope there will be many of you who can attend this year.

The certificate showing the hours of attendance at certified sessions will be offered to those who require it to give proof of learning. We have re-established Special Interest Groups for Transplantation and Paediatrics so we are hoping for increased interest in these areas. This year in Birmingham the Research and Education Boards will be giving us the most recent developments and will share with us their new ideas and past successes.

Abstracts submitted each year continue to increase both in subject and number. The difficulty for the Scientific Programme Committee is finding room for all those abstracts worthy of presentation. This is the first year which has enabled the authors to submit the abstracts "on-line". I hope this has made it an easier process. This year we are allowing more time for the presentation of some abstracts which has reduced the number of abstracts selected. This means that the standard of abstracts selected is even higher but will ensure that our Conference continues to deserve its excellent reputation. Therefore if you did send an abstract which has not been accepted this time, do not be discouraged and please go on sending your work.

The Programme Committee is committed to offering a programme that is of interest to everyone within the Renal Field, from senior managers to newly appointed staff. There would be no Conference without you - the delegates, and it is only through sharing our knowledge and experience that our practice can advance. It is through your knowledge that renal practice advances and new practices become accepted.

The Abstract Book lists all selected abstracts submitted by members of our Association as well as those from our invited Guest Speakers. They are in alphabetical order to help you find the abstracts of the papers you will be hearing.

The programme has been compiled round the Conference Topics. Each session has contributions from various professionals who comprise our multi-disciplinary association all reflecting our Conference Theme of how the different cultures are integrated in our one renal world. The oral presentation of posters is increasing every year and is a popular feature.

Your input is vital to the relevance of future Conferences. We need all of your ideas and your attendance at the Conference. Please remember to fill in the evaluation forms and let us know what you enjoyed and what you would like in the future. The planning committee does try to act on your suggestions.

Congratulations to all those who have had abstracts accepted. We welcome you and all the delegates to Birmingham which is a city full of diverse cultural interest. We hope that the new knowledge and stimulation received during the Conference will inspire you to return to your units ready with share your experiences with your colleagues and contribute to the well-being of our renal patients.

I would like to thank everyone who has contributed to this programme and look forward to seeing you in Birmingham.

Cordelia Ashwanden
Scientific Programme Co-ordinator

Vorwort

Liebe Freunde und Kollegen,

Willkommen zur 32. EDTNA/ERCA Konferenz. Wieder ist das Ziel dieser Konferenz, den Fortschritt in der nephrologischen Pflege voranzubringen, durch Präsentationen und formelle und informelle Diskussionen, die während der Konferenz zwischen den Kollegen der unterschiedlichen medizinischen Berufsrichtungen stattfinden.

Auch diese Konferenz bietet Preconference-Workshops des Research Board und der Special Interest Group für Transplantationen und die sehr beliebten interaktiven Workshops an. Die Auswertung dieser Workshops vom letzten Jahr zeigte einmal mehr, wie wichtig sie waren deshalb hoffe ich, dass viele von Ihnen diesmal teilnehmen können.

Die Teilnahmebestätigung für bestimmte Sitzungen wird den Teilnehmern angeboten, die diesen Fortbildungsnachweis benötigen. Wir haben die Special Interest Groups für Transplantation und Pädiatrie neu strukturiert und erwarten auf diesen Gebieten ein stärkeres Interesse. Das Research und das Education Board wird uns dieses Jahr in Birmingham eine Übersicht über die neusten Entwicklungen geben und neue Ideen und die jüngsten Erfolge mit uns teilen.

Die Zahl der eingereichten Abstracts nimmt jedes Jahr zu, sowohl an Zahl als auch an Themenumfang. Der Beirat des wissenschaftlichen Programms ist in der schwierigen Position, Platz für alle präsentationswürdigen Abstracts zu finden. In diesem Jahr ist es zum ersten Mal möglich, dass Autoren ihre Abstracts "online" übermitteln. Ich hoffe, dies vereinfacht das Verfahren. In diesem Jahr räumen wir der Präsentation der Abstracts mehr Zeit ein, was die insgesamt Zahl der ausgewählten Abstracts verringert. Das bedeutet, dass der Standard der ausgewählten Abstracts noch höher ist und damit den ausgezeichneten Ruf, den unsere Konferenz genießt, weiter gewährleisten. Sollte deshalb ein von Ihnen eingeschicktes Abstract diesmal nicht akzeptiert worden sein, seien Sie nicht entmutigt und senden Sie uns weiter Ihre Arbeiten.

Das Programmkomitee ist bemüht, ein Programm anzubieten, das für alle Teilnehmer aus dem nephrologischen Bereich interessant ist, von der erfahrenen Pflegedienstleitung bis zur Berufsanfängerin. Es gäbe keine Konferenz ohne Sie - die Teilnehmer, und nur indem wir unser Wissen und unsere Erfahrung miteinander teilen, kann sich unsere Arbeit verbessern. Durch Ihr Wissen entwickelt sich die nephrologische Praxis und neue Arbeitsmethoden werden angenommen.

Im Abstractbuch finden Sie alle ausgewählten Abstracts, die von den Mitgliedern unseres Verbandes und von den Gastrednern eingesandt wurden. Sie sind alphabetisch geordnet, was Ihnen das Auffinden der Abstracts die sie hören wollen, leichter macht.

Das Programm ist um die Themen der Konferenz herum zusammengestellt worden. Jede Veranstaltung beinhaltet Beiträge unterschiedlicher Experten, die unseren multidisziplinären Verband bilden und unser Konferenzthema, die Integration unterschiedlicher Kulturen in unsere nephrologische Welt, widerspiegelt. Die mündliche Präsentation der Poster nimmt jedes Jahr zu und ist ein beliebter Programmpunkt.

Ihr Beitrag sichert das Weiterbestehen der Konferenz in der Zukunft. Für die Konferenz brauchen wir Ihre Ideen und Ihre Teilnahme. Bitte denken Sie daran, die Bewertungsbögen auszufüllen und teilen Sie uns mit, was Ihnen gefallen hat und was Sie in der Zukunft gerne hätten. Das Planungskomitee wird sich nach Ihren Vorschlägen richten.

Glückwunsch an alle, deren Abstract angenommen worden ist. Wir heißen Sie und alle Teilnehmer in Birmingham herzlich willkommen, einer Stadt voller unterschiedlicher kultureller Strömungen. Wir hoffen, dass das Wissen und die Anregungen, die Sie während der Konferenz erhalten, Sie inspirieren werden und Sie diese Erfahrungen mit den Kolleginnen und Kollegen in Ihren Zentren teilen werden und zum Wohlbefinden unserer nephrologischen Patienten beiträgt.

Ich möchte allen danken, die ihren Beitrag zu diesem Programm geleistet haben und freue mich, Sie in Birmingham begrüßen zu dürfen.

Cordelia Ashwanden
Koordinatorin des wissenschaftlichen Programms

Avant-propos

Chers Amis et Collègues,

Bienvenu à la 32^{ème} conférence de l'EDTNA/ERCA. Comme d'habitude, le but de cette conférence est de faire avancer les soins en néphrologie au travers de présentations et de discussions formelles ou non entre les membres des équipes de soins multidisciplinaires. Cette conférence offrira encore les ateliers pré-conférence du Comité de la Recherche et du Groupe d'intérêt spécial de Transplantation, ainsi que les séances interactives toujours appréciées. L'évaluation des ateliers, l'année dernière, a encore montré leur pertinence, et j'espère donc que vous serez nombreux à pouvoir y assister cette année.

Le certificat montrant les heures d'assistance aux sessions certifiées sera offert à tous ceux qui ont besoin de donner des preuves de leur apprentissage. Nous avons créé des Groupes d'intérêt de Transplantation et de Pédiatrie et nous espérons donc augmenter votre intérêt pour ces domaines. Cette année à Birmingham, les Comités de la Recherche et de l'Éducation nous feront partager leurs récents développements, leurs nouvelles idées ainsi que leurs succès.

Les abstracts soumis chaque année continuent à augmenter en thèmes et en nombres. La difficulté pour le Comité du Programme Scientifique est de trouver assez de place pour tous les abstracts dignes d'intérêt. C'est la première année où les auteurs ont eu la possibilité de soumettre leur abstract "on line" et j'espère que cela simplifiera le processus. Cette année nous donnons plus de temps pour la présentation de chaque abstract ce qui a réduit le nombre final d'abstracts sélectionnés. Cela veut donc dire que le niveau des abstracts sélectionnés est plus élevé et que notre conférence continuera donc à mériter son excellente réputation. Par conséquent, si vous avez envoyé un abstract qui n'a pas été accepté, ne soyez pas découragés et continuer, s'il vous plaît, à nous envoyer vos travaux.

Le Comité du Programme Scientifique s'est engagé à offrir un programme qui offre de l'intérêt à toutes les personnes travaillant en néphrologie, des cadres au personnel récemment engagé. Il n'y aurait aucune conférence sans vous, les délégués, et c'est seulement en partageant nos connaissances et nos expériences que notre pratique peut évoluer. C'est grâce à vos connaissances que les avancées en néphrologie et les nouvelles pratiques sont acceptées dans les services.

Le Livre des abstracts contient tous les abstracts sélectionnés soumis par les membres de notre association ainsi que par nos invités. Ils sont listés par ordre alphabétique pour vous aider à trouver facilement les abstracts des présentations que vous choisirez.

Le programme a été construit autour des sujets de la Conférence. Chaque session rassemble des contributions de plusieurs professionnels de notre association multidisciplinaire, en référence au thème de la Conférence : "l'intégration des différentes cultures dans le monde de la néphrologie". La présentation orale des posters augmente chaque année et est toujours très appréciée.

Vos idées sont vitales pour que nos futures conférences restent pertinentes. Nous avons besoin de toutes vos idées et de votre présence à la conférence. Pensez, s'il vous plaît, à remplir les formulaires d'évaluation et à nous faire savoir ce que vous avez aimé et ce que vous aimeriez. Le comité d'organisation essaiera d'agir selon vos suggestions.

Félicitations à tout ceux qui ont eu des abstracts acceptés. Nous vous accueillons ainsi que tous les délégués à Birmingham qui est une ville pleine de curiosités culturelles diverses. Nous espérons que les nouvelles connaissances et les stimulations reçues pendant la conférence vous inspireront pour revenir dans vos unités de soins, prêtes à partager vos expériences avec vos collègues et contribuer ainsi au bien être des patients de néphrologie.

J'aimerais remercier toutes les personnes qui ont contribué à ce programme et espère vous voir à Birmingham.

Cordelia Ashwanden
Coordnatrice du programme scientifique

Voorwoord

Beste vrienden en collegae,

Welkom op de 32^{ste} conferentie van EDTNA/ERCA. Eens te meer is het doel van deze conferentie de vooruitgang van de nefrologische zorg en dit via presentatie van papers en via formele en informele discussies die zich tussen leden van het multiprofessionele zorgteam voordoen.

Tijdens deze conferentie zijn er ook weer Pre - conferentie Workshops, die door de onderzoeksraad en door de speciale interessegroep van de Transplantatie georganiseerd worden, naast de populaire interactieve sessies. De evaluatie van de workshops toonde hoe relevant men ze verleden jaar vond en daarom hoop ik dat jullie dit jaar met velen zullen deelnemen.

Het certificaat dat de uren van deelname aan gecertificeerde sessies aanduidt, zal aan degenen die bewijs van deelname moeten tonen, overhandigd worden. We hebben de speciale interessegroepen voor transplantatie en pediatrie opgericht en we hopen dat de interesse ervoor ook zal toenemen. Dit jaar zullen de onderzoeksraad en de opleidingsraad hun meest recente ontwikkelingen tonen en ze zullen ons in Birmingham deelgenoot maken van hun nieuwe ideeën en voorbij successen.

De abstracts gaan jaar na jaar crescendo zowel qua onderwerp als qua aantal. Het wetenschappelijk programmacomité heeft moeilijkheden om plaats te vinden voor al de abstracts die de moeite zijn om gepresenteerd te worden. Dit is de eerste keer dat een auteur zijn abstract online kan toesturen en misschien verloopt dit proces meer gesmeerd. Dit jaar staan we meer spreektijd toe aan de presentator van het abstract, waardoor het aantal geselecteerde abstracts natuurlijk teruggelopen is. Dit betekent dat de norm van de geselecteerde abstracts zelfs nog hoger ligt om de reputatie die onze conferentie heeft nog meer eer aan te doen. Daarom mag je, als je een abstract instuurde dat niet weerhouden werd, niet ontmoedigd zijn en moet je je werk blijven insturen.

Het programmacomité wil een programma brengen dat iedereen binnen het nefrologische vakgebied kan interesseren, van senior managers tot nieuw aangeworvenen. Er zou zonder jullie, de deelnemers, geen conferentie zijn en het is maar door kennis en ervaring te delen dat er vooruitgang binnen ons praktijkgebied mogelijk is. Het is via jullie kennis dat de nefrologische praktijk vooruitgang maakt en dat nieuwe praktijken aanvaard worden.

Het abstractboek bevat alle geselecteerde abstracts van de leden van de vereniging alsook van de geïnviteerde gastsprekers. Ze staan alfabetisch gerangschikt zodat jullie de abstracts die jullie willen volgen, gemakkelijk kunnen terugvinden.

Het programma wordt opgebouwd rond de conferentietopics. Iedere sessie heeft bijdragen van verscheidene beroepsmensen uit onze vereniging, die allen het conferentiethema reflecteren, namelijk hoe de verschillende culturen zich in één renale wereld integreren. De mondelinge presentatie van posters neemt ieder jaar toe en wordt almaar meer populair.

Jullie inbreng is vitaal voor de toekomstige conferenties. We hebben al jullie ideeën en jullie aanwezigheid op de conferentie nodig. Vul alstublieft de evaluatieformulieren in en laat ons weten wat jullie leuk vonden en wat jullie nog meer willen voor de toekomst. Het planningscomité probeert rekening te houden met jullie suggesties.

Bravo voor al degenen van wie het abstract aanvaard werd. Wij verwelkomen jullie en alle deelnemers in Birmingham, een stad vol diverse culturen. We hopen dat de nieuwe kennis en de stimuli die jullie tijdens de conferentie opdeden, jullie zullen inspireren om dit alles met de collegae van de afdeling te delen en aldus bij te dragen tot het welzijn van onze nefrologische patiënten.

Ik zou iedereen willen danken die tot dit programma heeft bijgedragen en ik verheug me erop jullie in Birmingham te ontmoeten.

Cordelia Ashwanden
Coördinator van het Wetenschappelijk Programma

Prólogo

Queridos amigos y compañeros,

Bienvenidos a la 32 conferencia de la EDTNA/ERCA. Una vez más, el propósito de esta conferencia sigue siendo fomentar el progreso del cuidado renal mediante la presentación de artículos y debates formales e informales entre equipos sanitarios multidisciplinares.

Una vez más, esta conferencia ofrecerá las habituales sesiones interactivas y los Talleres Pre-conferencia del Comité de Investigación y del Grupo de Interés Especial de Trasplante. La evaluación de los talleres de trabajo del pasado año ha vuelto a poner de relieve su importancia, por lo que espero que muchos de vosotros asistáis a ellos este año.

Todos aquellos que necesitéis un documento como prueba de aprendizaje podréis disponer de un certificado con el número de horas de asistencia. Hemos vuelto a establecer los Grupos de Interés Especial Pediátrico y de Trasplante, por lo que esperamos un mayor interés en estas áreas. Este año en Birmingham, los Comités de Educación e Investigación mostrarán sus avances más recientes y compartirán con nosotros sus nuevas ideas y últimos éxitos.

El número de abstracts y temas sigue aumentando cada año. La dificultad para el Comité del Programa Científico reside en encontrar un lugar para que todos estos abstracts puedan ser presentados de la forma que merecen. Este es el primer año en que hemos permitido a los autores el envío "on-line" de sus abstracts. De esta forma esperamos que el proceso resulte más fácil. Este año se ha reducido el número de abstracts admitidos para que el tiempo de presentación de los seleccionados sea mayor. Esto significa que el nivel de los elegidos es aún más alto, lo que garantizará que nuestra conferencia siga contando con una excelente reputación. Por tanto, si mandaste un abstract y no ha sido aceptado esta vez, no te desanimes y sigue enviándonos tu trabajo.

El Comité del Programa Científico se compromete a ofrecer un programa de interés para todos aquellos que trabajan en el Campo Renal, desde el personal más antiguo al más nuevo. Sin vosotros - delegados, la conferencia no existiría, pues nuestra práctica solo puede avanzar si compartimos nuestros conocimientos y experiencias. Vuestros conocimientos hacen posible que se acepten los avances en la práctica renal y las nuevas prácticas. El Libro de Abstracts presenta una relación de todos los abstracts seleccionados enviados por los miembros de nuestra Asociación y los Ponentes Invitados. Están en orden alfabético para que os resulte más fácil encontrar los abstracts de los artículos que escucharéis.

El programa ha sido recopilado según el Tema de la Conferencia. Cada sesión cuenta con contribuciones realizadas por varios profesionales pertenecientes a nuestra asociación multidisciplinaria, reflejando todas ellas el Tema de la Conferencia y cómo las diferentes culturas se integran en nuestro único mundo renal. La presentación oral de posters aumenta cada año y se está convirtiendo en algo muy popular.

Vuestra colaboración es vital para la importancia de futuras conferencias. Necesitamos todas vuestras ideas y que asistáis a la conferencia. Por favor, recordad completar los impresos de evaluación y hacernos saber lo que os gustó y los que os gustaría en el futuro. El comité organizador intentará satisfacer vuestras sugerencias.

Felicitaciones a todos aquellos cuyos abstracts han sido aceptados. Damos la bienvenida a Birmingham, una ciudad con un gran interés cultural, a todos los delegados. Esperamos que la nueva estimulación y los nuevos conocimientos adquiridos durante la conferencia os inspiren para que cuando volváis a vuestras unidades compartáis las experiencias vividas con vuestros compañeros y contribuyáis al bienestar de nuestros pacientes renales.

Me gustaría dar las gracias a todos los que habéis hecho posible este programa y espero veros en Birmingham.

Cordelia Ashwanden
Coordinadora del Programa Científico

Prefazione

Cari amici e colleghi,

Benvenuti alla 32 conferenza dell'EDTNA/ERCA. Ancora una volta lo scopo di questa conferenza è di far progredire l'assistenza nefrologica attraverso la presentazione di lavori e le discussioni, sia formali che informali, che si svolgono durante la conferenza tra i membri dei team multi-professionali sanitari.

Questa conferenza offrirà nuovamente i Workshop pre-conferenza organizzati dal Research Board e dal Transplant Special Interest Group, così come le popolari sessioni interattive. La valutazione dei workshop ha mostrato ancora la rilevanza avuta lo scorso anno, perciò spero che molti di voi potranno parteciparvi anche quest'anno.

Verranno offerti i certificati attestanti le ore di partecipazione e le sessioni certificate, a chi li richiederà come prova di formazione. Abbiamo ricreato lo Special Interest Groups per i Trapianti e la Pediatria, e speriamo che ci sia un aumento di interesse in queste aree. Quest'anno a Birmingham il Research e l'Education Boards ci offriranno gli sviluppi più recenti e condivideranno con noi le loro nuove idee e i suoi precedenti successi.

Gli abstract inviati continuano ad aumentare sia per soggetto che in numero. La difficoltà del Comitato per il Programma Scientifico è di trovare abbastanza sale per tutti gli abstract che valgono la presentazione. Questo è il primo anno che gli autori possono inviare gli abstract "on-line", spero che ciò abbia semplificato loro il processo. Quest'anno abbiamo concesso più tempo ad ogni presentazione, riducendo il numero di abstract selezionati. Ciò significa che lo standard di quelli selezionati è sempre più elevato, ma garantisce anche che la nostra conferenza possa continuare a mantenere la sua eccellente reputazione. Perciò, se avete inviato un abstract che non è stato accettato questa volta, non scoraggiatevi e continuate a mandarci i vostri lavori.

Il Comitato per il Programma è impegnato ad offrire un programma interessante per tutti coloro implicati in Campo Nefrologico, senior managers e al personale appena assunto. Non ci sarebbe una conferenza senza di voi - I delegati, ed è solo attraverso la condivisione delle nostre conoscenze ed esperienze che la pratica nefrologica può progredire. E' attraverso la vostra conoscenza che la pratica nefrologica migliorerà e che verranno accettate pratiche nuove.

L'abstract Book elenca tutti gli abstract selezionati presentati dai soci della nostra Associazione, così come quelli dei nostri Relatori Ospiti. I lavori sono presentati in ordine alfabetico per aiutarvi a trovare l'abstract della presentazione che state ascoltando.

Il programma è stato compilato seguendo gli Argomenti della Conferenza. Ogni sessione ha il contributo di diversi professionisti che compongono la nostra associazione multidisciplinare, e tutti hanno portato una riflessione sul Tema della Conferenza, su come differenti culture siano integrate nel nostro unico mondo nefrologico. La presentazione orale dei poster stà aumentando ogni anno e stà diventando una caratteristica popolare.

Il vostro input è vitale per la rilevanza delle conferenze future. Noi abbiamo bisogno di tutte le vostre idee e della vostra partecipazione alla Conferenza. Ricordatevi di compilare il modulo di valutazione e di farci sapere cosa avete gradito e cosa vorreste in futuro. Il comitato pianificatore cercherà di introdurre i vostri suggerimenti.

Congratulazioni a tutti coloro cui è stato accettato un abstract. Diamo il benvenuto a voi e a tutti i delegati di Birmingham, che è una città piena di diversi interessi culturali. Speriamo che le nuove conoscenze e stimoli ricevuti durante la conferenza vi ispireranno a ritornare nei vostri centri pronti a condividere le vostre esperienze con i vostri colleghi, e a contribuire al benessere dei nostri pazienti nefropatici.

Vorrei ringraziare tutti coloro che hanno contribuito alla stesura di questo programma e aspetto di vedervi a Birmingham.

Cordelia Ashwanden
Scientific Programme Co-ordinator

Πρόλογος

Αγαπητοί Φίλοι και Συνάδελφοι,

Καλώς ήρθατε στο 32^ο Συνέδριο της EDTNA/ERCA. Για άλλη μια φορά στόχος του Συνεδρίου είναι η προαγωγή της νεφρολογικής φροντίδας μέσα από την παρουσίαση των άρθρων και τις συζητήσεις, επίσημες και μη που λαμβάνουν χώρα στη διάρκεια του συνεδρίου ανάμεσα στα μέλη των διεπιστημονικών ομάδων παροχής φροντίδας υγείας.

Και φέτος θα πραγματοποιηθούν τα Προσυνεδριακά Εργαστήρια από το Ερευνητικό Συμβούλιο και την Ομάδα Ειδικού Ενδιαφέροντος της Μεταμόσχευσης, καθώς επίσης και οι συνεδρίες ευρείας συμμετοχής. Η αξιολόγηση των Εργαστηρίων αυτών έδειξε πόσο επικοδομητικά ήταν πέρυσι και έτσι ελπίζω ότι πολλοί από εσάς θα δηλώσουν συμμετοχή σε αυτά και αυτή τη χρονιά. Πιστοποιητικό που επιβεβαιώνει τις ώρες παρακολούθησης πιστοποιημένων συνεδριών θα παρέχεται σε εκείνους που επιθυμούν να έχουν απόδειξη της μάθησής τους. Επανιδρύσαμε τις Ομάδες Ειδικού Ενδιαφέροντος της Μεταμόσχευσης και της Παιδιατρικής Φροντίδας και ελπίζουμε σε μια ευρεία συμμετοχή στους τομείς αυτούς. Φέτος στο Birmingham το Ερευνητικό και το Εκπαιδευτικό Συμβούλιο θα μας ενημερώσουν πάνω στις πιο πρόσφατες εξελίξεις και θα μοιραστούν μαζί μας τις πρωτοποριακές τους ιδέες και τα παλιά τους επιτεύγματα.

Οι περιλήψεις που υποβάλλονται κάθε χρόνο συνεχίζουν να αυξάνονται τόσο σε θεματολογία όσο και σε αριθμό. Η δυσκολία για την Επιτροπή Επιστημονικού Προγράμματος είναι να οργανώσει την παρουσίαση των αξιόλογων περιλήψεων. Φέτος είναι η πρώτη χρονιά που δίνουμε τη δυνατότητα στους συγγραφείς να υποβάλλουν τις περιλήψεις τους "on-line". Εύχομαι αυτό να σας διευκολύνει. Επίσης αυτή τη χρονιά δίνουμε περισσότερο χρόνο για την παρουσίαση κάθε περιλήψης μειώνοντας κατ' ανάγκη τον αριθμό των περιλήψεων που θα επιλεγούν. Αυτό σημαίνει ότι τα κριτήρια επιλογής των περιλήψεων είναι ακόμη υψηλότερα, ούτως ώστε το Συνέδριό μας να συνεχίσει να διατηρεί την άριστη φήμη που ήδη έχει. Επομένως, εάν στείλετε μία περιλήψη, η οποία δεν έγινε αυτή τη φορά αποδεκτή να μην αποθαρρυνθείτε και σας παρακαλούμε να συνεχίσετε να μας στέλνετε τις εργασίες σας.

Η Επιτροπή του Προγράμματος δεσμεύεται να προσφέρει ένα πρόγραμμα ενδιαφέρον σε όλους όσους εργάζονται στο Νεφρολογικό Τομέα, από τους ανώτατους διοικητές έως τους νεότερους συναδέλφους. Χωρίς εσάς δεν θα υπήρχε συνέδριο και μόνο μέσα από την ανταλλαγή γνώσεων και εμπειριών θα αναβαθμιστεί η πρακτική μας. Μόνο μέσω της γνώσης θα γίνουν αποδεκτές οι νέες πρακτικές. Στο Βιβλίο Περιλήψεων θα βρείτε όλες τις επιλεγμένες περιλήψεις που έχουν υποβληθεί από μέλη της Ένωσής μας και από τους προσκεκλημένους Επίσημους Ομιλητές. Οι περιλήψεις παραθέτονται σε αλφαβητική σειρά, προκειμένου να ανατρέξετε ευκολότερα στις περιλήψεις των παρουσιάσεων που θα επιλέξετε να παρακολουθήσετε.

Το πρόγραμμα έχει συνταχθεί βάση τις Θεματικές Ενότητες του Συνεδρίου. Σε κάθε συνεδρία έχουν συμβάλει διάφοροι επαγγελματίες που απαρτίζουν τη διεπιστημονική μας Ένωση και όλες είναι σχετικές με το Θέμα του Συνεδρίου μας, πως δηλαδή οι διαφορετικές κουλτούρες ενσωματώνονται σε ένα νεφρολογικό κόσμο. Η προφορική παρουσίαση των αναρτημένων ανακοινώσεων αυξάνεται κάθε χρόνο και αποτελεί έναν ιδιαίτερα δημοφιλή και αγαπητό τρόπο παρουσίασης.

Συγχαρητήρια σε όλους αυτούς των οποίων οι περιλήψεις έγιναν αποδεκτές. Καλωσορίζουμε εσάς και τους εκπροσώπους σας στο Birmingham, μια πόλη με διάφορες πολιτισμικές επιδράσεις. Ελπίζουμε η νέα γνώση και τα ερεθίσματα που θα αποκομίσετε από το Συνέδριο να αποτελέσουν πηγή έμπνευσης για εσάς και θα επιστρέψετε στη μονάδα σας έτοιμοι να μοιραστείτε τις εμπειρίες σας με τους συναδέλφους συμβάλλοντας στην καλύτερη ποιότητα ζωής των νεφροπαθών.

Θα ήθελα να ευχαριστήσω όλους όσους συνέβαλαν στη δημιουργία αυτού του προγράμματος και ανυπομονώ να σας δω όλους στο Birmingham.

Cordelia Ashwanden

Συντονίστρια Επιστημονικού Προγράμματος

Guest Speakers

D. Adu	United Kingdom	D. O'Donoghue	United Kingdom
G. Bircher	United Kingdom	N. Ozdag	Turkey
P. Bourquelot	France	A. Piccoli	Italy
M. Chiaramonte	Italy	J.R. Polo	Spain
B. Cookson	United Kingdom	J. Radcliffe-Richards	United Kingdom
S. Davies	United Kingdom	G. Randhawa	United Kingdom
T. Feest	United Kingdom	A. Ready	United Kingdom
R. Gokal	United Kingdom	J. Rodicio	Spain
P. Gough	United Kingdom	L. Ruilope	Spain
J. Groothoff	The Netherlands	D. Shemesh	Israel
H. Hampl	Germany	T. F. Statham	United Kingdom
A. Kalokerinou- Anagnostopoulou	Greece	K. Van Acker	Belgium
S. Kreitler	Israel	R. Vanholder	Belgium
F. Locatelli	Italy	N. Venkataraman	Singapore
C. McIntyre	United Kingdom	S. Youngman	United Kingdom

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Scientific Programme Sunday, 21 September 2003

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
09:00	<p>Renal Failure* The epidemiology of renal failure Prof. Terry Feest <i>Chairs: Nicola Thomas Veronica Francis</i></p> <p>154 The epidemiology of Acute Renal Failure requiring renal replacement therapy Heather Martin</p> <p>76 A renal assessment centre - concept and 1st year data Terry Woodall</p> <p>177 Life quality of the patients haemodialysed in different places of Europe Anna Mróz</p>	<p>CORPORATE EDUCATION SESSION*</p> <p>GENZYME Phosphorus management as a component of overall patient management <i>Chair: Paul Van Malderen</i></p>	<p>The Challenges of Co-morbidity* The total regression of left ventricular hypertrophy Prof. Hannelore Hampf <i>Chairs: Doris Bahnmüller Hedi Lückerrath</i></p> <p>14 Assessment of dry weight by using blood volume monitor Ruth Yang</p> <p>111 Superior Vena Cava syndrome caused by internal jugular indwelling dialysis catheters Alexander Veretnik</p> <p>141 Cardiac output measurements with the Transonic monitor; a validation study Wil van der Mark</p>	<p>Oral Poster Presentations Cultural Issues* <i>Chairs: Alois Gorke Ronald Visser</i></p> <p>243 Transcultural issues related to the nursing assessment of renal patients Mumtaz Begum Goolam</p> <p>162 Managing cultural diversity Semitha Utham</p> <p>47 Analysis of depression in dialysis patients Mukadder Mollaoglu</p> <p>71 The effect of personality and mental status on the complications of peritoneal dialysis Muserref Albaz</p> <p>140 Treatment modalities in terminal renal failure in children over 2 decades Sanela Kelava</p> <p>45 Long term follow up of a CAPD patient with mental-motor retardation Ummuhan Zaimoglu</p> <p>245 Developing dialysis facilities in the Caribbean Jessima Samuels</p>	<p>Social Workers Special Interest Group Workshop* <i>Chair: Richard Dingwall</i></p> <p>7 An exploration into providing a kidney for transplantation as a living donor and personal meaning: implications for counselling Tony Walsh</p> <hr/> <p>10:00 – 10:30 Social Workers Special Interest Group Business Meeting</p>
10:30	C O F F E E I N N A T I O N A L I N D O O R A R E N A (N I A)				

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
11:00	<p>Improving Treatment Outcomes* Hypertension and its significance in the treatment of the renal patient Dr. Jose L. Rodicio <i>Chairs: Althea Mahon M^a Antonia Alonso Perez</i></p> <p>43 Role of blood volume monitoring in patient care: a clinic perspective Elisabeth Harman</p> <p>11 The introduction of an ongoing Skill Assessment Tool to the North West Dialysis Service Julie Owen</p> <p>229 Exercising during haemodialysis - the patient's and the staff's experiences Marion Frei</p>	<p>CORPORATE EDUCATION SESSION*</p> <p>HOSPAL Cardiovascular risk in dialysis: managing diabetic patients. New therapeutic approaches <i>Chair: Maria Saraiva</i></p> <p>Cardiovascular problems in diabetic HD patients Chantal Potier</p> <p>New approach in blood pressure management Karin Moret</p> <p>Cardiovascular stability improvement with acetate-free biofiltration Anna Marti i Monros</p> <p>Reduction of arrhythmias using potassium profiling technique Marie-José Boulard</p>	<p>Living with Renal Failure* The adult consequences of childhood renal insufficiency Dr. Jaap Groothoff <i>Chairs: Rainer Bühler Lijana Gaber</i></p> <p>22 Holism - a way of improving self image in children on dialysis Michal Weissman</p> <p>12 Children and adults: major differences in culture in any country Lida van Lingen</p> <p>261 The implementation of line sepsis protocol for semi permanent tunneled lines Heather Pitt</p>	<p>Anaemia in the Renal World* <i>Chairs: Jane Macdonald Jitka Pancirová</i></p> <p>175 Iron status and achievement of haemoglobin targets in European dialysis patients Riitta Tryyki</p> <p>208 Darbepoetin Alfa maintains target haemoglobin regardless of route of administration Laurent George</p> <p>61 Development of a safe and effective protocol for the administration of bolus dose intravenous iron Patricia Sirrett</p> <p>206 Conversion of sub-cutaneous to intravenous erythropoietin alpha in haemodialysis patients Catherine Johnson</p> <p>127 Geographic variations in anaemia management in European dialysis patients: baseline data from a large European studies programme Beatrice Szablyar</p> <p>284 Adequacy of anaemia management in The Netherlands Lucia ten Brinke</p>	<p>Technicians Special Interest Group Workshop* The conductivity of dialysis fluid Mr. Gert-Inge Bertinsson <i>Chair: Borge Rolfsen</i></p> <p>167 An empirical evaluation of risk based maintenance protocols and inspection plans in a dialysis program Narayan Venkataraman Chlorine guidelines Ian Morgan</p> <hr/> <p>12:00 – 12:30 Technicians Special Interest Group Business Meeting</p>
12:30	L A N G U A G E F O R U M S				
	L U N C H I N N A T I O N A L I N D O O R A R E N A (N I A)				

Scientific Programme

Sunday, 21 September 2003

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
14:15	<p>Cultural Diversity*</p> <p>How cultural diversity affects the provision of treatment by the health care team</p> <p>Prof. Shulamith Kreitler</p> <p><i>Chairs: Richard Dingwall Shoshana Fuchs</i></p> <p>242 5 year scientific research project on "psychosocial accompanying" in Germany Knud Erben</p> <p>199 Aggression and dialysis Claudia Mayer</p> <p>181 Supportive nursing, individually aimed and suited, as a bridging tool between cultures Riki Dahan</p>	<p>CORPORATE EDUCATION SESSION*</p> <p>GAMBRO</p> <p>Providing quality in chronic dialysis delivery</p> <p><i>Chair: Jane Macdonald</i></p> <p>Quality steps in haemodialysis Lars-Göran Nilsson, Lund, Sweden</p> <p>Providing more frequent and longer HD sessions – why and how? Richard Fredin, Lund, Sweden</p> <p>Quality steps in PD – guided by which set of values? Randi Ipsen, Lund, Sweden</p> <p>Improving quality in dialysis delivery – A European perspective Jan Cowperthwaite, Manchester, UK</p>	<p>Advanced Dialysis*</p> <p>Bedside evaluation of tissue hydration with bioelectrical impedance</p> <p>Dr. Antonio Piccoli</p> <p><i>Chairs: Lizzi Lindley Luc Picavet</i></p> <p>48 Development of a guideline for renal-nurses to promote adequate self management with regard to fluid restriction for dialysis patients Marie-José Litjens</p> <p>280 Nursing care of acute renal failure on intensive care units with Slow Extended Daily Dialysis Jozef Van Goubergen</p> <p>156 Cool dialysis - How effective is it? Paul Challinor</p>	<p>Diabetes in the World of Renal Failure*</p> <p>The role of the specialist renal-diabetic nurse</p> <p>Miss Sara Youngman</p> <p><i>Chairs: Judith Hurst Josefa Fenselau</i></p> <p>64 Collaboration - A way to improve the outcomes of the patient with diabetic nephropathy Colette Doyle</p> <p>202 A collaborative approach to improve patient outcomes using a diabetic foot assessment tool Julie Evans</p> <p>49 Improving the service to diabetic renal patients on haemodialysis Yvonne Bradburn</p>	<p>Paediatrics Special Interest Group* Workshop</p> <p><i>Chair: An Demol</i></p> <p>Chronic extracorporeal treatment in nephrology and non-nephrology patients, a challenge for the multidisciplinary team Jacqueline Knoll, Madelon Kleingeld</p> <p>Acute haemolysis during a haemodialysis session, a frightening experience An Demol</p>
15:45	T E A I N N A T I O N A L I N D O O R A R E N A (N I A)				

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
16:15	<p>Vascular Access*</p> <p>The integrated vascular access programme management*</p> <p>Dr. David Shemesh</p> <p><i>Chairs: Jean-Yves De Vos Elisheva Milo</i></p> <p>219 Training in self-care of haemodialysis patients with a permanent central line catheter Grigory Koifman</p> <p>194 New technique of implantation of a peritoneal catheter Ludmila Nermutova</p> <p>246 Treatment of haemodialysis catheter related infections Jonathan Davies</p>	<p>CORPORATE EDUCATION SESSION*</p> <p>AMGEN</p> <p>Driving best practice within the renal unit: The role of the specialist nurse</p> <p><i>Chair: John Sedgewick</i></p> <p>Clinical, operational and communication challenges Jean-Pierre Van Waelegem</p> <p>Using motivational techniques to achieve better patient outcomes Jennifer Percival</p> <p>Consensus on the way ahead Moderator: Lesley Bennett</p> <p>INTERACTIVE VOTING PADS</p>	<p>Nutrition: The Effects of Cultural Differences*</p> <p>The importance of cultural differences on diet in renal failure</p> <p>Ms. Gemma Bircher</p> <p><i>Chairs: Diane Green Gianina Veres</i></p> <p>213 Lanthanum carbonate, a novel non-aluminium, non-calcium phosphate binder, is effective and well tolerated in hyperphosphataemia Mary Speake</p> <p>26 Aspects of care in Afro-Caribbean nephrology nursing Sharon Morais</p> <p>217 Improving intercultural communication for patients with renal failure Geertrude Struijk-Wielinga</p>	<p>Transplantation: One World but Many Cultures*</p> <p>Transplantation in minority ethnic groups</p> <p>Mr. Gurch Randhawa</p> <p><i>Chairs: Ray Trevitt Jacqueline Barrie</i></p> <p>125 Black people needed as organ donors, and that's no joke! Cynthia Davis</p> <p>115 The awareness and acceptance of public towards tissue and organ donation Nurten Ozdag</p> <p>267 Meeting the different needs and expectations of South Asian patients in the area of organ donation and transplantation Neerja Jain</p>	<p>Technical Session*</p> <p>Mitigation of risks associated with water purification in dialysis units</p> <p>Mr. Narayan Venkataraman</p> <p><i>Chairs: Maurice Harrington James McCullagh</i></p> <p>268 Implementation of an integrated system for data and media on a dialysis unit Gerard de Rooij</p> <p>105 Convective-controlled double high flux haemodiafiltration: a novel blood purification modality Chorpaka Sakunsrijinda</p> <p>101 Studies in dialysate mixing in a single pass batch system Stefaan Claus</p>

Scientific Programme

Monday, 22 September 2003

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
09:00	<p>The Challenges of Co-morbidity*</p> <p>Assessing the cardio-vascular risk in renal failure</p> <p>Dr. Luis Miguel Ruilope</p> <p><i>Chairs:</i> Anna Marti i Monros Maria Fettouhi</p> <p>95 LDL removal - an unusual treatment in a satellite haemodialysis unit Elisabeth Wittich</p> <p>214 Lanthanum carbonate does not affect the pharmacokinetics of digoxin or warfarin Maggie Gill</p> <p>286 Safe swimming, a factor for better quality of life in peritoneal dialysis patients Magdalini Kostenidou</p>	<p>CORPORATE EDUCATION SESSION*</p> <p>FRESENIUS MEDICAL CARE</p> <p>Providing support for patients and health care professionals</p> <p><i>Chair: Michael Reichardt</i></p> <p>Kidney options – An educational resource for renal patients Carmen Maria González, FMC, Spain</p> <p>Daily treatment at home – A continuous challenge for patients, families and caregivers Katherine J Craig, BSc RN, Cardiff</p> <p>PD Serve – The support tool for health care professionals Pamela Martin, FMC, Dubai</p>	<p>Infection Control*</p> <p>Management of MRSA</p> <p>Prof. Barry Cookson</p> <p>Epidemiology and risk factors of HCV infection in the general population</p> <p>Prof. Maria Chiaramonte</p> <p>Epidemiology and management of Hepatitis C in the European haemodialysis population</p> <p>Mrs. Heather Jayasekera</p> <p>Mrs. Alessandra Zampieron</p> <p><i>Chairs: Maurice Harrington Lizzi Lindley</i></p>	<p>Living with Renal Failure*</p> <p>Sexual dysfunction in renal failure</p> <p>Ms. Althea Mahon</p> <p><i>Chairs:</i> Cordelia Ashwanden Veronica Francis</p> <p>195 Developing a nurse led erectile dysfunction clinic for renal patients Lesley Mason</p> <p>190 Sexuality and chronic diseases: what prevents us from speaking about it? Ilana Rafaelov-Atias</p> <p>266 The best care through new developments? An appraisal of the provision of culturally sensitive healthcare and information through government initiatives Neerja Jain</p>	<p>Transplant Special Interest Group Workshop*</p> <p><i>Chair: Ray Trevitt</i></p> <p>257 The influence of socio-demographic factors on renal allograft survival, late acute rejections and hospital stay Hans Vlamincck</p> <p>129 Attitudes of medical personnel towards cadaveric organ transplantation Jacqueline Barrie</p> <p>What patients must know about the side effects of immunosuppression Mirjana Calic</p> <p>Preparation for transplant Jacqueline Barrie</p> <hr/> <p>10:00 – 10:30 Transplant Special Interest Group Business Meeting</p>
10:30	C O F F E E I N N A T I O N A L I N D O O R A R E N A (N I A)				

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
11:00	<p>Vascular Access*</p> <p>Prolonging the life of vascular access</p> <p>Dr. Jose Ramon Polo</p> <p><i>Chairs:</i> Anna Marti i Monros Anna Mróz</p> <p>153 Vascular access in polycystic kidney disease patients Theodora Kafkia</p> <p>278 The problem of the central venous tunnelled catheter infections. A prevention protocol Loredana Scalambra</p> <p>236 Retrospective analysis of 11 years of Tesio catheter use Antoine De Cubber</p>	<p>CORPORATE EDUCATION SESSION*</p> <p>ROCHE</p> <p>The strength of choice: Focusing on patient needs for optimal anaemia management</p> <p><i>Chair: Georgia Thanasa</i></p> <p>Frank Carillo Moderator</p> <p>Lynn Hill Keynote speaker, climber, author</p> <p>PANEL DISCUSSION</p> <ul style="list-style-type: none"> - Lynn Hill - Dr. Paul Stevens - Patricia Sirrett - Jean-Pierre Van Waelegem <p>VIDEO CASE STUDIES</p> <p>INTERACTIVE SESSION WITH VOTING PADS</p>	<p>European Multi-professional Practice*</p> <p>The renal multi-professional team</p> <p>Dr. Donal O'Donoghue</p> <p>Presentation of EPD results</p> <p>Dr. Monique Elseviers</p> <p>Mr. Jean-Yves De Vos</p> <p>Management of anaemia in renal patients (The Czech Republic and Northern United Kingdom)</p> <p>Dr. Lizzi Lindley</p> <p>Ms. Jitka Pancirová</p> <p><i>Chair: Maurice Harrington</i></p>	<p>One World of Peritoneal Dialysis*</p> <p><i>Chairs: Denise Vijt Anastasia Laskari</i></p> <p>287 Are we underestimating ultrafiltration failure in our peritoneal dialysis patients? Althea Mahon</p> <p>67 Is the patient's choice of CAPD a matter of opportunity? Irit Elhanan</p> <p>51 Can Hepatitis B and C infections contaminate because of drained dialysate in chronic PD treatment Gülbahar Kirikçi</p>	<p>Education of Staff and Patients*</p> <p><i>Chairs: Nicola Thomas Lorna Engblom</i></p> <p>99 Maximising the potential of unqualified staff within the renal setting Nicola Finch</p> <p>157 Our dilemma: the self-marginal people Tai Mooi Ho Wong</p> <p>29 Promoting awareness of the nursing staff on the topic of organ donation and transplantation Anat Mordechai</p> <p>108 An audit of nurse compliance with a newly-developed connection and disconnection procedure for patients with vascular access Christopher Duncan</p> <p>135 Training and development - bridging the culture gap Alison Stapleton</p> <p>198 Renal community nursing; using the 5Es to maximise the care of our patients Pat Simoyi</p>
12:30	L A N G U A G E F O R U M S				
	L U N C H I N N A T I O N A L I N D O O R A R E N A (N I A)				

Scientific Programme

Monday, 22 September 2003

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
14:15	<p>Transplantation: The Diverse Effects of Cultural Differences*</p> <p>Cultural and religious differences for transplant patients</p> <p>Dr. Nurten Ozdag</p> <p><i>Chairs: Ray Trevitt Birsen Yürügen</i></p> <p>20 How having a counsellor as a donor advocate led to the compilation of Best Practice Guidelines for the emotional care of living donors</p> <p>Celia Eggeling</p> <p>161 Multicultural nursing approaches in transplantation</p> <p>Anastasia Tranda</p> <p>62 An institutional experience with exchange of kidneys among ABO incompatible living related donor-recipient pairs</p> <p>Meira Sternberg</p>	<p>Discussion*</p> <p>Vascular Access</p> <p>Expert Panel</p> <p>Pierre Bourquelot</p> <p>Franta Lopot</p> <p>Jose Ramon Polo</p> <p>David Shemesh</p> <p>Raymond Vanholder</p> <p><i>Chairs: Jean-Pierre Van Waeleghem Monique Elseviers</i></p>	<p>Discussion *</p> <p>Challenging the expense of the specialist renal team</p> <p>The members of the renal team are specialists, therefore should be paid accordingly</p> <p>Expert Panel</p> <p>Maggie Bayley</p> <p>Shoshana Fuchs</p> <p>Diane Green</p> <p>Athena Kalokerinou-Anagnostopoulou</p> <p>Donal O'Donoghue</p> <p>André Stragier</p> <p><i>Chair: An Demol</i></p>	<p>Oral Poster Presentations Quality of Life*</p> <p><i>Chairs: John Sedgewick Ronald Visser</i></p> <p>17 Kidney diseases and quality of life</p> <p>Erika Gurskaite</p> <p>63 Haemodialysed patients and quality of life</p> <p>Anastasia Laskari</p> <p>35 Variables associated with dialysis patients' achievement of target haemoglobin baseline results from a large European studies programme</p> <p>Johann Schorr</p> <p>207 Subcutaneous and intravenous recombinant human Erythropoietin dosing in European dialysis patients</p> <p>Didier Borniche</p> <p>41 Nocturnal home haemodialysis: focus on the partner</p> <p>Hermina Vos</p> <p>192 Nocturnal home haemodialysis, one year's experience</p> <p>Anna Verhallen</p> <p>106 Late consequences of non-compliance after renal transplantation</p> <p>Hans Vlaminc</p> <p>238 Improving quality of care for immigrants with renal failure</p> <p>Adoree van der Wiel</p>	<p>Aspects of Social Care*</p> <p>Renal patient empowerment</p> <p>Mr. Timothy Statham</p> <p>Understanding your patient</p> <p>Mr. Richard Dingwall</p> <p><i>Chairs: Jane Macdonald Theodor Vogels</i></p> <p>168 Asian Kidney Patients Association; a unit's experience in addressing multicultural educational needs</p> <p>Pat Simoyi</p> <p>130 Support group for patients during dialysis</p> <p>Gila Gilad</p>
15:45	T E A I N N A T I O N A L I N D O O R A R E N A (N I A)				
16:15	A N N U A L G E N E R A L M E E T I N G - H A L L 4				
	<p>EDTNA/ERCA ANNUAL GENERAL MEETING 2003*</p> <p><i>Chair: Maria de la Cruz Casal García, EDTNA/ERCA President</i></p> <p>Agenda</p> <p>Welcome by the President and Appointment of Scrutineers</p> <p>Approval of the 2002 AGM Minutes</p> <p>Association Activities and Progress Report</p> <p>Approval of 2002 Financial Report</p> <p>Results of Executive Committee Votes</p> <p>Introduction of New Executive Committee</p> <p>Motions</p> <p>Any Other Business</p> <p>Guest Speaker: Prof. Raymond Vanholder</p> <p>Title: EDTA/ERA - European Best Practice Guidelines</p> <p>Association Objectives 2003/2004</p> <p>Future Conferences</p> <p>Date and Venue for Next AGM</p> <p>Raffle</p> <p>Attendance at the AGM will be credited with 1 point</p> <p>A top-of-the-range digital camera will be raffled at the end of the session (attendees only)</p>				

Scientific Programme

Tuesday, 23 September 2003

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
09:00	<p>Co-morbidity Problems*</p> <p>Prevention of chronic kidney disease progression</p> <p>Prof. Francesco Locatelli</p> <p><i>Chairs: Georgia Thanasa Alessandra Zampieron</i></p> <p>253 Cockroft-Gault versus modification of diet in renal disease - individualising pre-dialysis management Jane Warrilow</p> <p>225 Predialytic education programme: a preliminary report Lorella Di Meo</p> <p>23 The renal nurse in a nephrology ward setting Margaret McCann</p>	<p>CORPORATE EDUCATION SESSION*</p> <p>BAXTER</p> <p><i>Chair: Denise Vijt</i></p>	<p>Diabetes: The Needs of the Renal Patient*</p> <p>Diabetes and renal failure</p> <p>Dr. Kristien Van Acker</p> <p><i>Chairs: Aase Riemann John Sedgewick</i></p> <p>94 Audit of dietetic intervention in a diabetic renal clinic Yvonne Bradburn</p> <p>89 Our infection statistics on intra peritoneal insulin administration in insulin depending diabetes mellitus end stage renal disease patients for 2001 and 2002 Michel Roden</p> <p>16 Dialysis and radiation Séverine Linders</p>	<p>Cultural Diversity*</p> <p>Community nursing and the problems caused through cultural differences</p> <p>Dr. Athena Kalokerinou-Anagnostopoulou</p> <p><i>Chairs: Richard Dingwall Anastasia Laskari</i></p> <p>131 Evaluation of a dialysis nurse practitioner role Ann Allenby</p> <p>98 Improving haemodialysis care through improved reorganisation of the dialysis Oshrit Skaletzky</p> <p>10 Haemodialysing at home: the client experience of self treatment Nick Polaschek</p>	<p>Infection Control*</p> <p><i>Chairs: Lizzi Lindley Hedwig Celosse</i></p> <p>69 Changes in the policy for prevention of Hepatitis B in patients on haemodialysis Lina Schwartz</p> <p>116 Catheter handling and microbial contamination of catheter connections Alois Gorke</p> <p>239 The experience of a haemodialysis unit in confronting and eradicating an epidemic outbreak of bacteremia Sónia Mayor</p> <p>160 Staphylococcal infections in peritoneal dialysis, screening and prevention Rina Fedorowsky</p> <p>173 PD exit site infections and peritonitis Sarah Dwyer</p> <p>203 Stability of antibiotics in peritoneal dialysis fluids and the impact of an altered PD peritonitis treatment schedule Sandy Goodwin</p> <p>232 Nursing interventions in the ESRD patient with thyroid carcinoma submitted to radioactive iodine Maria Santos</p>
10:30	C O F F E E I N N A T I O N A L I N D O O R A R E N A (N I A)				

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
11:00	<p>Peritoneal Dialysis*</p> <p>EAPOS: what can peritoneal dialysis achieve in anuric patients</p> <p>Dr. Simon Davies</p> <p><i>Chairs: Althea Mahon Maria Fettouhi</i></p> <p>285 The contribution of residual renal function and peritoneal clearance to patient survival and quality of life Lyda Engelsman</p> <p>231 Relationship between bioelectrical impedance and clinical classification of hydration status in PD Nives Arias Suarez</p> <p>176 Clinical outcomes of APD vs. CAPD Jayne Postlethwaite</p>	<p>Cultural Diversity*</p> <p>Developing culturally sensitive renal services</p> <p>Dr. Dwomoa Adu</p> <p><i>Chairs: Maggie Bayley Theodôr Vogels</i></p> <p>122 An escape from isolation: a support group for women on peritoneal dialysis Lina Schwartz</p> <p>256 Supportive group psychotherapy in ESRD patients on CAPD Anna Koimtsidou</p> <p>220 Patient and staff perceptions of how terrorist attacks affect the dialysis unit Eti Elenhoren</p>	<p>Management: Leadership in a Multi-professional team*</p> <p>The leadership programme</p> <p>Ms. Pippa Gough</p> <p><i>Chair: Judith Hurst</i></p>	<p>Advanced Dialysis*</p> <p>The haemodynamic response to dialysis and relevance to adequacy of treatment</p> <p>Dr. Chris McIntyre</p> <p><i>Chair: Rainer Bühler</i></p> <p>117 Breaking a vicious circle: decreasing dialysate Na to 138 meq/l and reduction of interdialytic gain Nurit Cohen</p> <p>249 Simple good and save – one priming method for all dialyser types Franz Techert</p> <p>163 Dialysis technology education - An imperative program for service excellence in dialysis care Narayan Venkataraman</p>	<p>Education Workshop*</p> <p>Continuing Professional Development - for all those interested in education and training of staff</p> <p><i>Chair: Nicola Thomas</i></p> <p>Introduction to Education Board products and services Nicola Thomas</p> <p>Basic Core Curriculum update Shoshana Fuchs</p> <p>123 Training needs analysis: a useful tool for planning staff development Debra Coupe</p> <p>Accreditation programme update John Sedgewick</p> <p>218 Advanced nurse practitioner training: the development of a competency based holistic and nephrology specific patient assessment document Pat Simoyi</p>
12:30	L U N C H I N N A T I O N A L I N D O O R A R E N A (N I A)				

Scientific Programme

Tuesday, 23 September 2003

	Hall 1 Translation	Hall 4 Translation	Hall 11	Hall 9	Hall 10
14:15 (NB (1 hour)	Transplant in a Multi-cultural World* Transplantation in the UK Indo-Asian population Mr. Andrew Ready <i>Chairs: Ray Trevitt Jacqueline Barrie</i> 263 The ethics, legalities and policy issues of Living Donor Transplantation from the Indian sub-continent, with specific regard to different value systems Neerja Jain	Paediatrics: The World of the Child* The creation of arteriovenous fistula in children Dr. Pierre Bourquelot <i>Chairs: An Demol Liljana Gaber</i> 40 Domiciliary paediatric peritoneal dialysis. Educational programme Encarnación Tornay Muñoz 235 How effective is education for prevention of infection in peritoneal dialysis catheter exit-sites? Meagan Stoby-Fields	Discussion Hypertension* Expert Panel Hannelore Hampf Francesco Locatelli Chris McIntyre Antonio Piccoli Luis Miguel Ruilope Raymond Vanholder <i>Chairs: Lizzi Lindley M^a Antonia Alonso Perez</i>	Oral Poster Presentations Access and Infections* <i>Chairs: Maria Saraiva Ronald Visser</i> 18 Shunt blood flow with blood temperature monitor Max Ramsauer 121 Introduction of the Dialock haemodialysis access system Carol Rhodes 191 Mind distraction as technique for pain relief in patients on haemodialysis Genia Rovner 164 The manometric profile of native arteriovenous fistulas (preliminary results) Sabik Khalid 75 The relationship of frequency of peritonitis with total KTV, residual kidney function and serum albumin level in peritoneal dialysis patients Jale Erturk	Nutrition Special Interest Group Workshop* Nutritional Assessment: Practical guide to the use of Subjective Global Assessment <i>Chair: Diane Green</i> Presented by: Ione Ashurst Kristel Lahuis Franca Pasticci Trudeke Struijk-Wielinga

15:30
Finish
16:30

L A S T S E S S I O N - H A L L 1

The Ethics of Buying or Selling Kidneys

Janet Radcliffe-Richards

**Director, Centre for Bioethics and Philosophy of Medicine
University College London**

**Presentation of Manuscript and Poster
Scholarships**

DEVELOPING CULTURALLY SENSITIVE RENAL SERVICES

D. Adu;
Queen Elizabeth Hospital, Birmingham, United Kingdom

Approximately 30% of patients on our chronic dialysis programme and 23% of the general population belong to an ethnic minority. Many of our patients practice religions other than Christianity and these include Muslims, Hindus and Sikhs. In order to deliver appropriate healthcare, we felt that our healthcare system must be responsive to the diverse needs of all patients including those from ethnic minority populations. We have initiated a comprehensive strategy to address this issue. We are trying to increase recruitment of staff from ethnic minorities and to ensure that they were treated fairly in terms of training and promotion. We arranged cultural awareness training for all staff. Our admission and outpatient procedures were adapted to reflect religious, cultural and language needs of all patients and at the same time we increased the provision of interpreters. Working with the renal dietician, we have provided diets appropriate to individuals from ethnic minorities. We appointed a multifaith advisor and have developed a culturally sensitive bereavement service. Finally we have provided patient information in an appropriate language and addressed inequities in access to renal transplantation. In attempting to develop a culturally sensitive programme we have learnt how to improve care given to all patients regardless of their ethnic background.

THE IMPORTANCE OF CULTURAL DIFFERENCES ON DIET IN RENAL FAILURE

G. Bircher;
Dietetic Department, Leicester General Hospital, United Kingdom

The nutritional aims of giving advice to those with renal failure revolve around three main areas - health promotion, nutritional status and accumulation of waste products. These aims are present for all patients with renal failure but the advice given and how it is delivered can vary depending on the cultural background of the patient. In the UK many units have a growing population of patients from different ethnic backgrounds. Giving effective nutritional advice is dependent upon understanding the effect of culture on nutrition and then being able to apply acceptable changes to the diet. In understanding the effect of culture one has to take into account the beliefs and concerns about food and health as this may influence reaction to professional advice. There needs to be an understanding of the pattern of eating and what, other than hunger, that this pattern is satisfying. A good working knowledge of foods and cooking methods is essential so that advice, which is practical and feasible, is given. In Leicester understanding the cultural differences on diet for our Asian patients with renal failure has resulted in the development of dietitians who are skilled to deliver nutritional advice with confidence. This advice is delivered in a way, which is appropriate and well received. The key to success lies in taking time to understand cultural differences, respecting the importance that this has on diet, and explaining the need for changes to the patient and then negotiating and agreeing these changes using appropriate dietary instructional material.

THE CONDUCTIVITY OF DIALYSIS FLUID

G. Bertinsson;
Sweden

The dialysis fluid consists of a solution of inorganic salts that are dissociated in electrically charged ions. These ions can move in an electric field giving the salt solution electrically conducting properties, called conductivity. The conductivity of the dialysis fluid is a parameter well suited for measuring the total concentration of salt. The conductivity is easy to measure with a reasonable accuracy and the measuring device is usually very stable over time. It can be used for both proportioning and supervision of the concentrate intermixing. The conductivity behaviour of a salt solution is however complicated and depend in a non-linear way on temperature, total salt concentration and salt/glucose composition. The accuracy of the conductivity measurement is given by the calibration. A successful calibration needs good knowledge about the measuring device and the calibration solutions.

THE CREATION OF ARTERIOVENOUS FISTULA IN CHILDREN

P. Bourquelot;
Jouvenet Medical Center, Paris, France

Microsurgery for angioaccess in children includes the use of a surgical microscope, microsurgical instruments, prophylactic tourniquet-induced haemostasis and no-touch surgery. In the recent publications concerning angioaccess in children the percentages of grafts vs. arteriovenous fistulas (AVF) varied from 54% to 76% without microsurgery, and from 0 to 14% with microsurgery. Similarly the percentages of AVF, which failed to mature, varied from 30% to 33% without microsurgery, and from 5 to 10% with microsurgery. In a personal series of 380 children receiving haemodialysis, 434 microsurgical angioaccesses were created, 78% being distal autologous AVF. Eighty-five percent of the distal radial-cephalic AVFs were patent after 2 years and 60% after 4 years. These results of microsurgically created AVF are probably responsible, at least in part, for the high percentage of end stage renal disease (ESRD) children treated by haemodialysis on 1 February 2003 in Paris using an autologous fistula (70%), while only 24% were haemodialysed via a central venous catheter and 6% were on peritoneal dialysis. This compares favourably with the annual publication of the North American Paediatric Renal Transplant Cooperative Study in 1996 reporting that two-thirds of the dialysis population were maintained on peritoneal dialysis and that the majority of haemodialysis accesses were external percutaneous catheters. Microsurgical AVFs are also created successfully in non-ESRD children requiring frequent blood access for various chronic diseases. It has been possible to create a distal AVF in 68% of cases and long-term patency rate was just below 60% after 10 years. Microsurgery is mandatory for creation of arteriovenous fistulas, the best form of angioaccess for children treated by haemodialysis or requiring repeated access to blood in various non-renal diseases.

EPIDEMIOLOGY AND RISK FACTORS OF HCV INFECTION IN THE GENERAL POPULATION

M. Chiaramonte;
University of L'Aquila, Italy

The hepatitis C virus (HCV) is a blood-borne virus. It needs a large inoculum, because of its low infectivity. Therefore its transmission is mainly iatrogenic. Its sexual, vertical and interpersonal transmission is occasional.

We can recognize four epidemiological patterns:

- a) Low prevalence countries (i.e.: U.K., North Europe, Australia, U.S.) (antiHCV= <3%) with a pick of HCV carriers in young adults.
- b) Intermediate (Medium-High) prevalence countries (i.e.: Italy, Japan, etc) (anti HCV+ve 5-12%) with the number of carriers steadily increasing with advancing age. In these countries the maximum prevalence of antiHCV+ve is in the elderly (over the age of 50 yrs).
- c) High prevalence countries (ie. Egypt) (antiHCV+ve >15-20%) with a high carrier rate at any age.
- d) By contrast, in the few surveys carried out in primitive areas or in very closed communities (where the Western medicine is absent) the HCV was virtually absent.

These different patterns reflect the different ways of HCV transmission. In low prevalence countries the infection is a consequence of blood or blood-derived products transfusion (up to the recent past) or to risk behaviours in adult life (ie. drug addiction, tattoo, etc). This infection is therefore confined in subgroups of population.

In medium prevalence countries, such as Italy, the HCV infection is mainly "community acquired". The main route of transmission has been the glass syringes used for medical treatments at home. In these countries, the parental home therapies with vitamins, "liver-tonics", antibiotics, etc became very popular in the '50-'70. These treatments were given by non-disposable glass syringes "sterilized" by a short home boiling. The HCV infection is present in all social classes and mainly in females (because of the higher use of injecting treatments in them?). It is prominent in those aged over 50 yrs (with antiHCV+ve prevalences up to 30-35%) reflecting the infections which occurred in the '50-'70. Another prevalence peak (<3%) is observed in the 30-40 yr class of age, due to drug addiction. HCV is virtually absent under the age of 30 yrs, as shown by the decline in new infections. A very high prevalence of HCV infected subjects has been recently observed in Egypt.

This had been correlated to the use of not-disposable equipments in the anti-schistosomiasis prophylaxis campaign. A similar phenomenon would occur in developing countries or in poor groups of the population, in cases where Western medicine was used without being able to afford the expense of disposable injecting material.

The absence of HCV in primitives or in closed populations where the injecting therapy is unknown confirms the iatrogenic way of HCV transmission.

EAPOS: WHAT CAN PERITONEAL DIALYSIS ACHIEVE IN ANURIC PATIENTS

S. Davies;
EAPOS Group, United Kingdom

Whereas maintenance of residual renal function is known to improve survival in peritoneal dialysis patients, the clinical outcomes of anuric patients treated with automated peritoneal dialysis (APD) - a therapy that in principle will enable delivery of increased clearances and better ultrafiltration in high solute transport patients - are less well known. EAPOS (European APD Outcome Study) is a 2-year, prospective, multi-centre study designed to establish the feasibility and role of APD in these circumstances. 177 patients from 28 centres in 14 European countries were enrolled with a median age of 54 years (range 21-91). Previous median total time on dialysis was 38 months (range 1.6-259) and 36% of patients had previously been on HD for >90 days. Diabetes and cardiovascular disease were present in 17% and 46% of patients respectively. The APD prescription was adjusted at physician discretion to aim for creatinine clearance = 60L/wk/1.73m² and ultrafiltration = 750ml/day. Baseline solute transport status was determined by peritoneal equilibration test. At one year, 78% and 74% achieved clearance and ultrafiltration targets respectively; median drained dialysate volume was 16.2 L/24h with 50% patients using icodextrin. Achieved ultrafiltration throughout the study was not related solute transport category whereas patients below the ultrafiltration target at baseline had worse peritoneal membrane ultrafiltration capacity. At 2 years, patient survival was 78% and pure technique survival was 62%. Baseline predictors of poor survival were age (>65 years, P=0.006), nutritional status (SGA grade C, P=0.009), diabetic status (P=0.008) and UF (<750 ml/24h, P=0.047). Time-averaged analyses showed that age, SGA grade C and diabetic status predicted patient survival with UF the next most significant variable (risk ratio 0.5 per L/day, p=0.097). Neither baseline or time-averaged creatinine clearances nor baseline solute transport category predicted patient or technique survival. Peritonitis was the single most common cause of technique failure. This study shows that anuric patients can successfully use APD, and that achieved ultrafiltration rather than creatinine clearances or solute transport are the treatment factors associated with clinical outcomes.

MANAGEMENT OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

B. Cookson;
Laboratory of Healthcare Associated Infection, Health Protection Agency, London, United Kingdom

MRSA was identified shortly after the use of methicillin in the 1960s. Clinicians questioned their significance and importance. There is now abundant evidence that MRSA strains vary but can be as virulent as sensitive strains. Prevention and management will be discussed within the rubric of interactions between the seed (the "bug": there are now sophisticated typing systems to inform this), the soil (patient case-mix: the aged are particularly susceptible) and the climate (the ways in which we deliver healthcare). A European perspective will be presented as will endeavours (such as HARMONY, HELICS and EARSS networks) to address these by learning from each other's experiences. There is an urgent need for the renal professions to compare experiences and strategies to prevent and control MRSA colonisation and infection on their units.

CULTURAL DIVERSITY IN MANAGING END STAGE RENAL DISEASE

R. Gokal;
Manchester Royal Infirmary, Manchester, United Kingdom

Culture signifies customs and a way of life of a particular people and encompasses aspects related to religion, language, customs, rituals, accepted behaviour and norms. In the modern world because of movement of people, related to political, economic and social reasons, multicultural communities have become more prominent; these are superimposed on the diversity that already exists in individual countries. This cultural "invasion" if tolerated and accepted, enhances the life of the people there but it also raises major issues of a social, racial and political nature. In this context, major problems can arise when renal failure strikes. This is partly related to the carers being of the 'host' culture. The patient then has not only to battle with this disparity but also the vagaries and difficulties of the treatment for ESRD. In this situation interaction with people, who may have little or no knowledge of the cultural background of the patient can raise enormous difficulties and anxieties, which are undoubtedly going to impact on the quality of life and satisfaction with treatment. Examples of patients with differing cultural backgrounds being disadvantaged in terms of dialysis access, as well transplantation are available. Underlying all this, however, is one common goal that encompasses the way we manage these patients and impart treatment, no matter what cultural background they come from - the desire to improve longevity of life and achieve an acceptable quality of life. This involves a caring approach, a giving ethos, and imparting treatment with comfort, respect and patience. We in this profession have a very privileged position being entrusted with the life-long care of these patients. It is for us to be able to incorporate the cultural differences, diverse as they may be, in imparting the best treatment we can. Even if we cannot understand the cultural background at least we can give therapy with compassion, love and caring and if we are able to achieve this, then the barriers of cultural differences can be surmounted and overcome to the advantage of the patient. Cultural differences provide a challenge - they can be used to foster better relationships and enrich the diversity of society.

THE ADULT CONSEQUENCES OF CHILDHOOD RENAL INSUFFICIENCY

J. Groothoff;
Emma Children's Hospital, Amsterdam, The Netherlands

We performed a long-term follow up study to the late somatic and psychosocial effects of end-stage renal disease (ESRD) in all Dutch patients with ESRD-onset between 1972 & 1992 at <15th years of age, born before 1979. The cohort consisted of 249 patients, of whom 63 had died. The mean duration of ESRD was 15.5 years. No patient was lost to follow up. The overall mortality was 31 times as high as expected for age. Risk factors were a long dialysis duration and hypertension. Stroke was overall the most common cause of death, followed by cardiac disease after 10 ESRD years. Co-morbidity: We found a high prevalence of left ventricular hypertrophy and aortic valve calcifications, and an increase of the mean arterial wall stiffness in both dialysis and transplanted patients, all being important mortality risk factors. Over 60% was severely growth retarded, 37% had clinical apparent bone disease and 18% was disabled by bone disease. Osteoporosis was found in more than 50%. Psychosocial effects. The mean schooling was very low and the mean IQ-score was 10 points lower, compared to the general Dutch population. Patients had most trouble with tasks, which require concentration, memory and general knowledge. Dialysis and transplanted patients had similar IQ-scores. A low IQ was associated with a long duration of dialysis. Our dialysis patients with childhood ESRD-onset had an impaired physical quality of life (Qol), but contrary to dialysis patients with adult ESRD-onset, they had a normal mental Qol. Patients with a renal transplant overall had a normal Qol. Over 60% of all patients were employed. Significantly more dialysis patients were found medically unfit to work than transplanted patients. Also, more dialysis patients did voluntary work.

COMMUNITY NURSING AND THE PROBLEMS CAUSED THROUGH CULTURAL DIFFERENCES

A. Kalokerinou-Anagnostopoulou;
University of Athens, Athens, Greece

Most of us live in multi-cultural societies. Communication is an organized and patterned system of behaviour that regulates and makes possible all nurse-client interactions. It is the exchange of messages and the creation of meaning. Barriers to communication include differences in language, worldview and values. Culture plays a significant role in our health. The use of cultural knowledge in community nursing practice begins with a careful assessment of clients and families in their home environment. Minority cultures often suffer more inequalities and disadvantages as compared with the majority culture. The long-term benefits which migrant workers, refugees and their families make to the economic, social and political aspects of the receiving society is forgotten, until economic need forces politicians to consider it. Community-based services are built on collaboration and partnership between community leaders, consumers and providers. Nurses must be able to care in culturally competent ways.

THE TOTAL REGRESSION OF LEFT VENTRICULAR HYPERTROPHY

H. Hampl;
Dialysis Center, Kuratorium for Dialysis and Transplantation, Berlin, Germany

Background: In haemodialysis patients, numerous factors often lead to left ventricular hypertrophy (LVH) and influence the cardiac prognosis. Two factors are most important for the development of LVH: renal anaemia (excentric LVH) and arterial hypertension (concentric LVH).
Methods and results: Between 1997 and 2003, we recruited 145 consecutive patients into our single centre ambulatory care study, new patients undergoing haemodialysis. Cardiac risk factor assessment and therapeutic management were carried out with the following aims: correction of metabolic acidosis (predialytic $\text{HCO}_3^- = 23\text{mM/L}$), antihypertensive treatment by use of β -blockers, ACE-inhibitors and AT₁-receptor blockers, control of hydration, albumin, heart rate and anaemia (predialytic haemoglobin 14.5g/dl). Serial echo-cardiographies were performed every 3 to 6 months. Based on initial left ventricular mass index (LVMI g/m²), 4 groups were defined. Group 1: 52 patients with initial normal LVMI (served as control group) were held in normal range (LVMI 103 ± 16.0 to 98 ± 17 g/m², ns) Group 2: 47 patients with moderate LVH experienced total regression (LVMI 170 ± 38 to 109 ± 17 g/m², $p < 0.01$). Group 3: 37 patients with severe LVH were significantly improved, but not normalized (LVMI 195 ± 53 to 165 ± 25 g/m², $p < 0.01$). Group 4: 9 patients did not respond to therapeutic efforts (LVMI 208 ± 46 to 256 ± 54 g/m², $p < 0.01$) because of severe heart diseases. They were transferred to cardiac surgery. Total 2-year mortality of all patients was 23.2%, however, the cardiac mortality was only 11.6%. The initial cardiac condition in 67 patients with NYHA2 could be clinically normalized.
Conclusion: In haemodialysis patients, a therapeutic regime of total anaemia correction and cardiovascular risk factor management is possible and it appears to be beneficial, however, regression of LVH is a slow process.

HOW CULTURAL DIVERSITY AFFECTS THE PROVISION OF TREATMENT BY THE HEALTH CARE TEAM HOW CULTURAL DIVERSITY AFFECTS THE PROVISION OF TREATMENT BY THE HEALTH CARE TEAM

S. Kreitler;
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Taking care of a sick person is primarily an encounter between people who happen to fulfill different roles in the given context. The encounter between the caretaking health professional and the patient in nephrology involves confrontation with diverse characteristics of the patient, including gender, age, physique, social class, religion, nationality, beliefs and convictions, habits and behaviors. The effect of these and other characteristics on the process of caretaking depends to a large extent on the cultural background of the involved individuals. It is culture that may turn the characteristics of human beings into barriers or bridges between people. Due to the ongoing cultural diversity and political tensions, Israel constitutes a particularly adequate context for observing and studying the effects of culture on caretaking. Two theoretical approaches will be presented designed to contribute to accounting for the effects and devising means for turning them into bridges between human beings. One approach deals with meaning assignments and the other with the formation of motivational dispositions shaped by beliefs about oneself, about rules and norms, about goals and about reality. Examples will deal with caretaking of a Muslim woman by a male Israeli nurse, of a terrorist and his victim in the same context, kidney donations from a killed Israeli to a Palestinian patient, etc.

PREVENTION OF CHRONIC KIDNEY DISEASE PROGRESSION

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Preventing chronic kidney disease (CKD) progression is not only a medical challenge, but also a growing social and economic problem in many countries. Proteinuria and hypertension are the major factors contributing to CKD progression and effective antihypertensive therapy is currently the single most important treatment. ACE inhibitors, Angiotensin II receptor antagonists (AT1RA) and non-dihydropyridine calcium channel blockers (CCBs) have the greatest capacity to reduce proteinuria. According to the results of large trials, ACE inhibitors also significantly reduce the rate of loss of renal function in diabetic and non-diabetic CKD. AT1RAs have recently been proved of benefit in type 2 diabetic nephropathy. Dyslipidemia can possibly contribute towards the deterioration of renal function. While waiting for the results of on-going trials, statins cannot still be recommended for renoprotection. Given the cardiovascular risk associated with hyperlipidaemia, statin use should be encouraged in CKD. Dietary protein restriction is effective in slowing down the rate of CKD progression, but this effect marginally delays the time when dialysis is needed. The calcium and phosphorus metabolism seems not to play a major role in the progression of renal injury. Given that hyperphosphatemia and hyperparathyroidism may contribute to the development of cardiovascular disease, great attention has to be paid to the treatment of these conditions. Finally, it is important to stress that general medical care is a very strong determinant of patient outcome in the conservative phase of CKD treatment in order to guarantee patient well-being and quality of life.

THE HAEMODYNAMIC RESPONSE TO DIALYSIS AND RELEVANCE TO ADEQUACY OF TREATMENT

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The cardiovascular response to haemodialysis is intimately associated with modern concepts of dialysis treatment adequacy. Although previously relatively under investigated there is an increasing appreciation of both the pathophysiology of aberrant haemodynamic response to haemodialysis and the subsequent consequences. The aim of this session is give an update on the current state of knowledge concerning the study of cardiovascular response to haemodialysis (with special reference to newer non-invasive technologies that can be employed within the dialysis facility). Furthermore to discuss how both normal and aberrant responses can impact on degree of solute, sodium and water removal, as well as effects on both short and long term myocardial function.

SEXUAL DYSFUNCTION IN RENAL FAILURE

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It is widely accepted that many chronic renal failure patients suffer from sexual problems. It has been reported that up to 82% of male dialysis patients suffer from some degree of erectile dysfunction (Palmer, 1999; Rosas et al, 2000) and up to 43% in transplanted patients (Fearing, 1995). Male patients also suffer from a loss of libido, gynaeosmastia, altered body image and infertility. Female renal patients may also experience problems such as a reduction in libido, arousal dysfunction, dyspareunia, inability to orgasm, lack of lubrication, anovulation and the psychological problems associated with altered body image and infertility (Leiblum, 1998; Palmer, 1999). The causes of sexual problems in renal patients are multifactorial and include uraemia, hormonal imbalance, vascular and neuropathic problems, anaemia, medications, and psychological aspects of living with a chronic illness and zinc deficiency. The purpose of this session is to provide an overview of the underlying causes, the assessment process and current treatment options available to both male and female dialysis patients.

THE RENAL MULTI-PROFESSIONAL TEAM

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Renal failure has a profound, complex, life-long impact on patients and their families/carers. During their patient 'journey', they will encounter numerous multi-professional staff, who each have a contribution to make to their management and care. Patients' varied needs, physiological, practical, psychological and social, will form a focus for different staff at different times. To optimise clinical outcomes and enhance quality of life, multi-professional staff require a joint perspective on management, underpinned by recognition of the varied professional skills required, and an ability to work flexibly and in collaboration. Form the patient/carer perspective, they are entering into a partnership arrangement, taking on some aspects of responsibility for their care, and negotiating some dependency needs. Access to multi-professional staff, especially as needs change is crucial, and good relationships with staff can enhance coping strategies, leading to better compliance and improved medical outcomes. The use of regular review systems, involving patient/carers and key team members, provide opportunities to assess needs, make corporate plans and draw in multi-professional expertise. Patients expect a high level of information exchange, so that all those interact with understand their situation and needs. Skills in communication, negotiation, assessment and networking, should form part of the multi-professional education and training programmes. Staff with positive attitudes to their contribution, are more motivated, experience greater job satisfaction and lower stress levels. Mutual multi-professional support in the stressful area of renal care, can enhance the individual staff members ability to cope, providing an improved response to patient/carer needs.

CULTURAL AND RELIGIOUS DIFFERENCES FOR TRANSPLANT PATIENTS

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Turkey has a highly heterogeneous social and cultural structure. The "modern" and "traditional" exist simultaneously; there are sharp contrasts between population groups. Due to the diverse geographical, climatic, cultural, social, and economic characteristics of different parts of the country, five regions are distinguished reflecting differences in socio-economic development levels and demographic conditions. There are variations in terms of health status among the geographical regions, also considerable differences in regions between urban and rural not only in health, but also in economic status, employment, literacy, education, language, marriage, type of family, cultural and religious practices, customs and tradition, as well as access to and usage of health services. Insufficient quantity and quality of infrastructure and health personnel, as well as poor distribution of services and health personnel, differences between the benefits of social security system, urban-rural differences, and habits of people especially of those who live in rural and are uneducated all contribute to the delivery of health care and receipt of care by people. Both conventional and traditional treatments exist in Turkey, and conventional treatment is sought mostly by those who are under the coverage of social security, and have access to health care services. Traditional rituals and folk therapy are practiced in rural areas widely amongst the poor, uneducated and more religious.

BEDSIDE EVALUATION OF TISSUE HYDRATION WITH BIOELECTRICAL IMPEDANCE

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Bioelectrical impedance analysis (BIA) is commonly based on estimates of body compartments through regression equations with a 95% prediction interval greater than ± 3 to 6 Kg or L, which is not useful at the bedside. Clinical utility can be achieved using Vector BIA as a stand-alone procedure based on patterns of direct impedance measurements (impedance, Z vectors). Ionic solutions of soft tissues generate body impedance (90% from limbs, lean more than fat soft tissue) that is represented with a point vector, and is a combination of resistance, R (i.e. the opposition to current flow through intra- and extracellular ionic solutions) and reactance, Xc (i.e. the capacitative component of cell membranes and organelles, tissue interfaces and gel). Tissue anisotropy prevents accurate estimation of the ECW through multifrequency BIA whereas it allows single-frequency 50 kHz current to provide the best information. Z is considered a bivariate random vector, and an individual subject's vector reading is compared with the reference, 50%, 75% and 95% tolerance ellipses of the healthy population. Vectors falling out of the 75% tolerance ellipse indicate an abnormal tissue impedance, which is interpreted and ranked following two directions: 1) changes in tissue hydration along the major axis (dehydration or hyperhydration, with long or short vectors, respectively); and 2) changes in tissue mass along the minor axis (more or less cell mass, with vectors falling above (left) or below (right) the major axis, respectively). Vector BIA allows a direct, reliable, semiquantitative evaluation of tissue hydration and structure in any clinical condition without knowledge of the body weight.

PROLONGING THE LIFE OF VASCULAR ACCESS

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Cost complications menacing access life are related to venous stenosis affecting peri-anastomotic area in radio-cephalic fistulas and the graft-vein junction in grafts. These stenosis will cause a progressive decrease in access flow and thrombosis of the access as a final event. Thrombosis rates increase at unacceptable levels when native fistula flows decrease below 500 ml/m or when graft flows decrease below 800 ml/m. The role of nurses in detecting stenosis is essential. The measurement of access flow remains the cornerstone for stenosis detection. Duplex scan is a possible method to measure access flow but this technique needs an expert sonographer. Online methods such as the Transonic[®] device or other related tools can be used for nurses in routine surveillance programmes. They are easy to use and can be performed in half an hour during dialysis. Prompt fistulographic study is advised when critical flow levels are reached. A multidisciplinary approach (nephrologists, nurses, surgeons and radiologists) is advised to decide the best treatment: surgical correction or radiological angioplasty. Most peri-anastomotic stenosis in radio-cephalic fistulas should be surgically treated by a proximal anastomosis preserving the old puncture sites. A radiological angioplasty is advised as a first approach for treating graft-vein stenosis. Surgical correction by a graft extension to a healthy proximal vein is chosen when re-stenosis needs a repeated angioplasty in less than six months. Central stenosis are best treated with repeated angioplasty. A good surveillance programme can extend the life of most vascular accesses, mainly the grafts, which can reach a secondary patency similar to native fistulas.

TRANSPLANTATION IN MINORITY ETHNIC GROUPS

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The incidence of hypertension and diabetes within the South Asian and African-Caribbean populations in the UK is significantly higher than within the White population. Inevitably this impacts on the demand for renal replacement therapy (RRT) in areas of the country that have higher minority ethnic populations. However, this phenomenon is not unique to the UK. Countries such as the US, Canada, Australia, New Zealand, and Singapore have been grappling with similar issues related to increased renal failure secondary to diabetes in particular communities. What is clear from these countries is that efforts need to be focussed in all areas of the renal care pathways from prevention to transplantation. In the UK, the Government has recently launched its Cross Cutting Review on Tackling Health Inequalities which emphasises the importance of reducing health inequalities at all levels of the health service. This paper provides a timely review of how transplant inequalities may be reduced among the UK's minority ethnic groups by learning from initiatives around the world.

HYPERTENSION AND ITS SIGNIFICANCE IN THE TREATMENT OF THE RENAL PATIENT

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In diabetic and non-diabetic patients with renal disease, arterial hypertension, together with proteinuria, are the most important risk factors for renal insufficiency progression. Hence, the need for strict control of the blood pressure values which, under these circumstances, should be less than 130/75 mmHg, especially if the proteinuria is greater than 1 gram. Any drug that succeeds in reducing blood pressure values to the above mentioned levels has a beneficial effect on the protection of renal damage however, with the same pressure decreases, angiotensin renin system inhibitors have a greater protection, probably due to their haemodynamic effect on the glomerulus, reducing the intraglomerular pressure. In non-diabetic renal diseases, angiotensin converting enzyme inhibitors (ACEI) have shown better protection in the different studies published in the literature as AIPRI, REIN, AASKD, meta-analysis of Jafar, etc. The ACEIs are also effective in type 1 diabetes with the classical study of Lewis and in type 2 diabetes with the Ravid study. The superiority of the angiotensin receptor blockers (ARB) in the treatment of type 2 diabetes has been verified when they are compared with placebo or calcium channel blockers (CCB) (RENAAL, IDNT, IRMA, etc, recent publication). Therapeutic combinations of ACEI and CCB and finally ACEI and ARB are very promising for the treatment of arterial hypertension in patients with renal lesion. The results of the COLLABORATE study recently published have special interest. They showed that the combination of an ACEI with an ARB was much more effective than when the drugs were administered separately, even in patients with important renal insufficiency.

THE INTEGRATED VASCULAR ACCESS PROGRAMME MANAGEMENT

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Algorithms for an integrated approach to the creation of arteriovenous fistulas (AVFs) and maintenance of functional patency, were developed under the direction of a dedicated vascular access surgeon. Pre-operative imaging, modified anaesthetic and surgical techniques, together with a post-operative surveillance program, were implemented in a program to maximize autogenous arteriovenous fistula creation and to significantly improve functional patency in both autogenous and prosthetic fistulas. High-resolution duplex ultrasonography was added to careful clinical assessment in timing, planning and follow-up of the dialysis access. Supraclavicular brachial plexus block, which allowed the use of an arterial tourniquet and gave a postoperative sympathectomy-type effect, was used preferentially for anaesthesia, and together with meticulous surgical technique, prevented spasm. Access puncture, post-operative follow-up and surgical revisions were planned in close cooperation with the nephrology team. After surgery, patients entered a program of frequent and regular access surveillance and maintenance. Prophylactic surgical revisions and endovascular interventions were performed routinely according to ultrasonography findings in order to prevent thrombosis. Thrombolysis and thrombectomy were performed without delay when AVFs thrombosed, minimizing the usage of central venous access and salvaging the central veins. 613 AVFs were constructed from when the Access Center was established in 1999 until 2002. The ratio of autogenous versus prosthetic fistula construction rose from 35% before 1999 to 70% in 2001 and 2002. For autogenous fistulas the early failure rate was <1% and the 18-month functional patency was 98.6%. For prosthetic fistulas the early failure rate was 5.6% and the 1-year functional patency was 91.4%. In conclusion, high functional patency rates for AVFs can be achieved in the setting of an integrated vascular access management program comprising good planning, attention to anaesthetic and surgical technique, close follow-up and aggressive intervention.

ASSESSING THE CARDIO-VASCULAR RISK IN RENAL FAILURE

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End-stage renal disease is accompanied by a 20-30 fold increase in cardiovascular risk. In fact cardiovascular disease is by far the most prevalent cause of death in dialysis patients. Now-a-days it is well recognized that diabetes and nephrosclerosis are the most prevalent causes of terminal renal failure. Recently in both entities the existence of a significant elevation in cardiovascular risk in those patients presenting minor alterations in renal function when compared with those patients not presenting renal alterations has been amply described. The finding of microalbuminuria, proteinuria, small elevations in serum creatinine or of a decreased estimated creatinine clearance is frequent and indicates that the cardiovascular risk is elevated. The kidney and its alterations constitute a very, if not the most, important marker of risk for fatal and nonfatal stroke and myocardial infarction, as well as of peripheral vascular disease. The relevance of these facts in daily clinical practice is of great relevance in order to obtain the best simultaneous protection of renal function and of the cardiovascular system.

RENAL PATIENT EMPOWERMENT

T. Statham;
Chief Executive, National Kidney Federation, United Kingdom

The National Kidney Federation is the only National Kidney Charity actually run by Kidney Patients for Kidney Patients. It has only two roles:-

1. Campaigning for improvements in renal service and provision.
2. Providing Patient Support Services required at a National level
 - The NKF lobbied for, established, and now services the "All Party Parliamentary Kidney Group" of MP's and Lords in Parliament.
 - The charity maintains a continuous dialogue with Government, and with other renal pressure groups and organisations.
 - The NKF website www.kidney.org.uk is now greater than 500 pages in size and is viewed by more than 200,000 Patients, Carers, Renal Doctors and Nurses worldwide. The website was built by Kidney Patients and is maintained by Kidney patients.
 - The NKF runs the "National Kidney Patients Helpline" and is the largest provider of renal leaflets in the UK.
 - The NKF employs an Advocacy Officer and has recently started a Younger persons Group. The three day Annual NKF Conference is attended by in excess of 400 kidney Patients.

DIABETES AND RENAL FAILURE

K. Van Acker;
Belgium

In this presentation attention will be drawn to the different interpretations of micro-albuminuria in type 1 and type 2 diabetes mellitus. In the last decades we have learned that microalbuminuria in type 2 DM is a representation of the general macrovascular disease, and in type 1 the microalbuminuria is a good predictor of nephropathy and its evolution. An overview of the evolution of nephropathy to terminal kidney disease will be given.

According to the new paper of B. Perkins in the New England Journal we will give the new results of evolution of microalbuminuria. The different possible therapeutic approaches will be discussed. Diabetes control and new criteria of hypertension management are crucial together with dietary restrictions and stopping smoking.

The approach of good lipid control plays an increasingly important role in the management of this disease.

Attention will be given to the natural evolution of nephropathy and how we can patients help to cope with its evolution to terminal kidney disease. Some special educational tools will be discussed.

MITIGATION OF RISKS ASSOCIATED WITH WATER PURIFICATION IN DIALYSIS UNITS

N. Venkataraman;
NKF Singapore

Water quality is important in haemodialysis and many studies have shown that use of ultra-pure water improves outcomes. ESRD patients undergoing haemodialysis are exposed to large volume of water and hence, the health risks posed by contaminants and toxins in the dialysate are greatly magnified. Re-processing of dialyzers in many countries and the advent of HDF has underlined the need for ultra-purity of fluids. There are simply too many variables that can affect the outcome in haemodialysis and some of them are often categorized as risk factors.

What are the risk factors related to water purification? What are the potential impacts and likelihood? What are dialysis providers and manufacturers doing to mitigate these risks? What do the standards and guidelines say? Provision of ultra-pure water requires a well-designed purification and distribution system, combined with a systematic monitoring and maintenance program. Modern water purification systems have de-ionizers, carbon filters, particle filters, reverse osmosis and ultra-filtration membranes designed to facilitate regular, simultaneous disinfection of the RO unit, distribution loop and the haemodialysis machines. UV and Ozone based technologies have been successfully used in dialysis units. Although disinfection programs may vary based on the overall system design and quality monitoring practices, they should be proactive. Recent studies on bio-film formation and prevention have highlighted the effectiveness of heat disinfection. The use of ultra-filters against endotoxins, especially during high-flux haemodialysis, cannot be undermined but is it affordable for all? Alternative cost-effective technologies need to evolve for best practices to be implemented worldwide. Re-engineering processes based on a risk management plan can help in minimizing adverse events and this may result in long-term cost savings.

THE ROLE OF THE SPECIALIST RENAL-DIABETIC NURSE

S. Youngman;
St. Helier Hospital, Carshalton, United Kingdom

Diabetes as a chronic disease is often complicated in its management, when interposed with chronic and end stage renal failure, patients, carers and health care professionals are often confused by either very little or conflicting advice, for the patient cared for by 2 specialities and the health care provider disease and symptom management is challenging.

The role of the renal diabetes nurse has developed in several units over the last ten years, depending on the needs of the service delivered to the patient, within that unit the role is multifaceted, from education of patients carers and the multidisciplinary team, alongside opening up channels of communication between departments and referring hospitals.

This nurse role is unique in the fact that the nurse has the opportunity to manage diabetes and renal failure from many angles. In disease prevention, education across all health care settings in prevention of renal failure. To the management of those patients pre dialysis, during dialysis, transplantation and through the relationships developed supporting the patient through withdrawal and conservative management.

And secondly for those patients who develop diabetes post transplant or whilst on dialysis the nurse is able to offer advice and support to ensure the diabetes is managed effectively.

DRIVING BEST PRACTICE WITHIN THE RENAL UNIT: THE ROLE OF THE SPECIALIST NURSE

Amgen

Are you interested in sharing more examples of 'best practice' in the renal unit with your colleagues? Attend this interactive session to find out how you can make a difference to your patients.

Co-chaired by Lesley Bennett (UK) and John Sedgewick (UK), this symposium will provide insight into nursing best practice within the renal unit, as well as the opportunity to learn simple motivational skills to improve communication with your patients.

Jean Pierre Van Waeleghem (Belgium) will address some of the challenges associated with running an efficient and effective renal unit, highlighting the ways in which nurses can overcome these barriers.

You will participate in workshops to learn ways of getting to know the person behind the patient, how best to motivate your patients, and why these aspects are so important to driving improvements in patient care. The faculty will demonstrate simple skills and techniques that you can take away into your daily practice to help your patients achieve greater compliance and treatment success.

Following this workshop, there will be an interactive session during which you will be able to provide your feedback. You can voice your thoughts on which aspects of the care process you can now improve, and how confident you feel that the techniques presented will assist you in making a difference to your patients.

PROVIDING QUALITY IN CHRONIC DIALYSIS DELIVERY

Gambro

Improving the quality of chronic dialysis care is a continuous and multi-faceted task in which renal nurses and technicians have a central role. Best practice guidelines give support in areas like what dialysis dose to deliver and how to achieve high quality water for dialysis. New equipment is introduced and new procedures applied as steps to improve treatment quality. For the patient even the smallest step can make a big difference. Furthermore, alternative ways of delivering haemodialysis, more often and/or in longer sessions, are presently explored in the hope it will improve patients' quality of life and long-term outcome.

The utilization of PD varies largely within Europe mainly as a consequence of national healthcare systems and the culture of renal care. Guidelines on how to best treat the PD patient are discussed and much focus is on the preservation of the peritoneal membrane. However, as PD is a self-care treatment, it is important to balance clinical decisions with the social needs of the patient.

The many diverse European cultures and healthcare systems affect how chronic dialysis is provided. Moreover, human and financial resources are often limited. As Gambro Healthcare provides dialysis in several European countries clinical performance measures have been developed to assure in all places an adequate level of care.

Learning objectives: The aim of the session is to address some steps that provide quality in the delivery of dialysis. It aims to answer questions like:

- What are the current guidelines for dosing in dialysis?
- Within each HD therapy mode, be it low-flux, high-flux or convective, what steps can be taken to improve treatment quality?
- More frequent and/or longer HD treatment-what benefits are there and how can it be realized?
- How is it possible to balance medical needs with social and financial requirements to improve the quality of the PD treatment?
- How can reporting and monitoring of clinical performance measures improve the quality of dialysis delivery across a diverse European healthcare environment?

PROVIDING SUPPORT FOR PATIENTS AND HEALTH CARE PROFESSIONALS

Fresenius Medical Care

The first session titled „Kidney Options“ - An educational resource for renal patients focuses on the efforts by Fresenius Medical Care to expand services to renal patients that started with the Kidney Options project in October 2002. The basic structure of Kidney Options was developed by colleagues from FMC North America and was then modified to serve the local needs in different countries. The objective of this new service is to provide information about renal illness and treatment options to renal patients and their relatives by offering an easy and informative tool on ESRD. Contacts with physicians', nurses' and patients' associations helped to build up a support tool taking into account patient needs. The basic platform of the service is an internet web site with information on renal diseases, specialized hospitals, educational material as well as on diet and nutrition: Print media are also available to inform the patients.

While "Kidney Options" providing information to the patient "PD Serve" is the support tool on Peritoneal Dialysis for health professionals. The success of a Peritoneal Dialysis (PD) program depends on many factors such as quality of training, educational tools and good follow-up care. Fresenius Medical Care created PD Serve™ as a comprehensive innovative global service developed for health care professionals to enhance the quality of peritoneal dialysis care by providing education and services.

While providing the best possible care daily treatment at home is a continuous challenge for patients, families and caregivers. Over the last ten years, centres on the American continent and in Europe have established programmes which offer patients haemodialysis on a daily basis. Improvements in PD technology have enabled patients to be offered automated dialysis on a nightly basis, thereby reducing the restrictions on their lifestyle and improving the quality of their dialysis. Undoubtedly there are resource implications, in both financial and staff terms in implementing these new technologies, but what are the costs to the patients and their families or caregivers? The presentation will address the wider impact dialysis treatment may have on the family unit.

CARDIOVASCULAR RISK IN DIALYSIS: MANAGING DIABETIC PATIENTS. NEW THERAPEUTIC APPROACHES

Hospital

Diabetes is a growing worldwide concern and is a major risk factor for ESRD patients. Today cardiovascular disease continues to be the main cause of death for those patients. Our education session aims at presenting epidemiological and clinical data showing the significant increase in the number of diabetic patients in the HD population. The first speaker will introduce the complications and co-morbid factors of diabetic HD patients, especially in terms of cardiovascular stability. The three following speakers will present some therapeutic responses such as:

- a new approach in blood pressure management, thanks to Physio dialysis which enables a better control of the hydro-electrolytic balance,
- use of acetate-free biofiltration (AFB) for personalized correction of the acid-base balance and improved cardiovascular stability due to the total absence of acetate,
- low systemic heparinization procedure with AN69ST membrane to improve dyslipidaemia,
- a new AFBK technique with potassium profiling for reduction of cardiac arrhythmias.

THE STRENGTH OF CHOICE: FOCUSING ON PATIENT NEEDS FOR OPTIMAL ANAEMIA MANAGEMENT

Roche

Aim: The Roche Corporate Education Session will provide practical approaches that focus on strengthening the nurse in meeting patient needs for optimal renal anaemia management.

Methodology: The session will be initiated with a presentation by an accomplished athlete and author, who will relate her personal experience on how making the right choices in critical situations leads to successful outcomes. After the initial presentation, a panel consisting of renal nurses and a nephrologist will show video case studies of dialysis patients and interviews with renal nurses, profiling issues of subcutaneous administration, treatment outcomes, patient compliance, and empowerment in the face of anaemia management. Facilitated by a moderator, the panelists, along with audience interaction through a voting pad system, will contribute their expertise to discussions about these case studies and interviews.

Conclusions: Through discussion based on patient case studies with panelists and the audience, the nurse will have a better understanding and background for making the right choices in optimizing renal anaemia management.

Education

COLLABORATION - A WAY TO IMPROVE THE OUTCOMES OF THE PATIENT WITH DIABETIC NEPHROPATHY

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The incidence of diabetes in the United Kingdom is set to double by 2010 from 1.4 to 2.8 million, this does not include the 1 million who are believed to be undiagnosed. Approximately 40% will develop Diabetic Nephropathy.

Historically there has been minimal collaboration between the Diabetes Specialist Nurse (DSN) and the Renal Specialist Nurse (RSN), which has impacted on the psychological social and clinical management of the patient with Diabetic Nephropathy.

A renal diabetes nurse forum was initiated to include the DSNs who refer to our centre. The aim of this forum was to empower both renal and diabetic nurses with the knowledge to improve patient outcomes, objectives were set and an action plan was put into place.

A study day followed where members of the multidisciplinary team from both primary and secondary care attended. The day covered the management of patients with Diabetic Nephropathy and the role of the nurse specialist involved in their care.

Feedback from the day was very positive and indicated that future study days would be beneficial to discuss the wider issues involved and develop stronger links between the professionals involved (MDT). The aim is to continue with this forum to promote early detection of the disease, introduce evidence based prevention and management strategies in line with the Renal and Diabetes National Service Framework.

IS THE PATIENT'S CHOICE OF CAPD A MATTER OF OPPORTUNITY?

I. Elhanan, R. Mizrahi;
Hadassah University Hospital, Jerusalem, Israel

In the past few years our dialysis centre has seen a decline in the percentage of patients with end stage renal disease (ESRD) being treated with chronic ambulatory peritoneal dialysis (CAPD).

This decrease occurred despite an overall growing of the number of patients receiving renal replacement therapy (RRT) suggesting a failing educational system for informing the patients regarding different dialysis modalities. In order to optimise the distribution of dialysis modality we recently initiated a predialysis clinic with integrated care concept.

The present study was undertaken to summarize the dialysis modality of all the patients that received RRT between January 2001 and 2003 and to better characterize the population suitable for a predialysis education program.

Of the 184 patients who started chronic RRT in the last two years, 100 were referred from the emergency room or other medical departments and were treated by acute haemodialysis following insertion of a central catheter. Of the remaining 84 patients referred from our predialysis clinic, 73 had good haemodialysis access and 11 (13%) were prepared for CAPD. Only four patients (4%) from the acute haemodialysis population later on changed to CAPD. These preliminary data show once more the importance of patient predialysis education and its determinative role in the choice of dialysis modality. In addition, we believe that the understanding of a predialysis schedule by the referral staff is of great importance since the impact of early and optimal pre-ESRD care positively influences the prognosis of the patient.

MAXIMISING THE POTENTIAL OF UNQUALIFIED STAFF WITHIN THE RENAL SETTING

N. J. Finch;
Preston Dialysis Unit, United Kingdom

Problem: Recruitment and retention of nurses has been a major obstacle to the planning of renal services both within the haemodialysis unit and the renal ward.

PURPOSE: By identifying this problem within our centre we were prompted to professionally develop our unqualified staff through in-house training linking theory to practice. Our challenge was to facilitate innovation to benefit patient care.

Design: Initially all unqualified staff complete an introduction package to provide increased knowledge and skill. On completion of this package all unqualified staff complete their level 2 vocational training then move on to level 3 the aim of which is to provide a good understanding of knowledge, assessment of current practice and promote professional development. Methodology of assessment is observational and written. To support the candidates, monthly structured teaching sessions are held and all candidates must attend regular clinical supervision sessions.

Findings: The structured education package has helped unqualified staff develop their confidence and their skills when caring for renal patients. Through providing an environment that is conducive to learning, both communication and staff morale has improved demonstrating our commitment to continued professional development.

Conclusion: Evaluation of the development package demonstrates that retention of unqualified staff has improved and feedback from candidates has been positive.

Relevance: Recruitment and retention continues to be a major problem within renal nursing. The implementation of this package demonstrates that in order to maintain standards and deliver high quality patient care all unqualified staff require training and development.

TRAINING NEEDS ANALYSIS: A USEFUL TOOL FOR PLANNING STAFF DEVELOPMENT

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A Training Needs Analysis (TNA) is a multi-faceted review of staff competence to identify individual and collective development needs. This paper discusses the use of the TNA process in a regional unit where it significantly contributed to the planning and prioritisation of staff development activities. The TNA undertaken comprised three main components: a learning audit questionnaire, focus groups and completion of a skills matrix by registered nurses (RNs).

118 learning audit questionnaires were returned (60% response) providing staff perceptions of the unit as a learning environment. 68% felt encouragement for learning and development was good or excellent, and a scoring system attached to this questionnaire will make comparisons possible at a future date.

The skills matrix provided a "snapshot" of the current skills, and importantly, perceived training needs of a selection of RNs (57). Specific skills and knowledge were identified including acute care, specialist courses and peritoneal dialysis skills. This was of particular significance in preparation for the planned re-configuration of renal services.

64 staff attended the focus groups and were given the opportunity to voice their opinions and suggestions regarding staff development. Specific issues raised have led to changes in, and proposals for, the future development of staff e.g. a structured development programme, mentor/assessor preparation.

This paper demonstrates that TNA is an extremely useful tool to help identify, prioritise and balance individual staff development needs and service requirements. There is scope for further development of the TNA and aspects could easily be incorporated into annual individual performance review.

BLACK PEOPLE NEEDED AS ORGAN DONORS, AND THAT'S NO JOKE!

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Black Africans and Caribbeans are very poorly represented as organ donors. Current statistics reveal that less than 1% are donors. Hypertension and diabetes, which are very prevalent in the black community, are primary causes of renal failure. A fair proportion of black people, therefore, require transplantation. To address this problem the African Caribbean Organ Donation Awareness Project (ACODAP) was set up. Its main purpose was to investigate the likely barriers to organ donation in these communities, and to increase awareness of the need.

Research was conducted into the perceived barriers to organ donation in black communities. The main categories found were:

- Lack of awareness
- Religion/culture
- Fear/mistrust
- Myths
- Prejudice

Through the research findings, lack of awareness was noted to be one of the leading barriers to donation. Work has therefore been actively entered into to raise awareness via the media, patient and celebrity involvement. ACODAP has worked alongside the Department of Health in providing donor families to share personal stories for TV, radio and through community health initiatives. These have made a difference to the public's understanding of the importance of donation.

Previous research suggests that churches can provide a positive forum for education. Evaluations received following presentations made at a number of local black majority churches, showed that approximately 60% of those present were influenced in favour of organ donation. Further church meetings, radio debates, education leaflets, donor families are required to meet the aims of ACODAP and to realise a positive growth in donation in black communities.

TRAINING & DEVELOPMENT - BRIDGING THE CULTURE GAP

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A national shortage of qualified nurses has resulted in the recruitment of 17 international nurses. The programme for junior nurses was devised to maximise communication through interactive learning in conjunction with training in the clinical area.

All the nurses had completed their adaptation programme in Nursing Homes and were unfamiliar with NHS hospital routines. We recognised that there were differences in the nurses' roles from country to country and the transition proved to be difficult. It was identified that in order to bridge the culture gap and to promote continued high standards of patient care, a theory programme would enhance their practical skills.

A variety of needs were identified by the ward staff, professional development team and the overseas nurses themselves. In response a series of six study days were planned to assist the overseas nurses in developing the role of a staff nurse in the U.K. These included communication skills, nursing documentation, admission and discharge planning, tissue viability, the cardiac arrest situation, professional issues, diabetes and general nephrology nursing. As a result, 15 out of the 17 overseas nurses have progressed to become efficient, valued members of the nursing team in their clinical areas, and are respected by both staff and patients. The programme is now recognised and has been adopted throughout the Trust in the overseas nurse arena.

OUR DILEMMA: THE SELF-MARGINAL PEOPLE

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Cultural diversity is nowadays a common phenomenon in most developed countries. Its impact is felt in our daily life, as well as in the health care settings. Hospital del Mar, due to its geographical location, cares for 27% of migrant patients from a varied cultural background. Endeavours are made to promote cultural awareness among staff and to facilitate communication. However, a significant part of the Spanish Gypsies, albeit not immigrants are by far the most problematic cultural group.

A questionnaire study was conducted to validate the difficulty in attending these Gypsies versus the migrant patients. The questionnaire was distributed to different health care professionals in our hospital. The result is not surprising. On one hand, with the migrant patients, the problems encountered in professional-patient interaction are mainly due to language barrier. On the other hand, with the Gypsies, who speak fluent Spanish, the problems are far more extensive. These are often generated by their abiding cultural values, distinctive lifestyle, low educational level and rejection of the shared norms of the majority. Any attempts to persuade them to adhere to hospital rules are often futile as a result of their negative attitudes. Staff have expressed occasional feelings of weariness in dealing with such situations.

Should we be more understanding and not be prejudiced to cultural orientations? How can we educate ourselves better to avoid confrontations? We therefore believe that the 32nd EDTNA/ERCA Conference would be a good opportunity to share cultural experiences and to learn new strategies for culturally appropriate care.

ASIAN KIDNEY PATIENTS ASSOCIATION; A UNIT'S EXPERIENCE IN ADDRESSING MULTICULTURAL EDUCATIONAL NEEDS

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The aim of this abstract is to share our experience in addressing the cultural needs in our renal patients through involving the public by forging links with the Asian Kidney Patients Association (AKA). Historically our unit provided the same care to all the patients. It however became apparent that different ethnic groups had unique needs e.g. communication, that were not being adequately addressed, as evidenced by the higher incidence of take on rates, accessibility to the resources provided by the unit and the fewer numbers of ethnic patients receiving cadaveric transplants. The South Asian patients were targeted as they form a significant proportion of our ethnic minorities.

In line with the recommendations of the Department of Health we provided education, support and counselling to the ethnic renal patients and their families in partnership with the AKA. We addressed this by organising information days; making available appropriate audio-visual and written patient information; organising and participating in community and media events where awareness of kidney disease was raised. Formal, informal and gender specific support groups were formed. Liaisons with the local Asian community and Business were established. Patients and our Government Auditing Body recognised this model of care as an example of good practice. The AKA and the patients look for support to the Government and the Hospital for the continuation of this service.

We intend to extend this service to the other ethnic groups in our unit, our Hospital and nationally.

RENAL COMMUNITY NURSING; USING THE 5ES TO MAXIMISE THE CARE OF OUR PATIENTS

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The aim of this abstract is to share the experience of our nephrology community team in incorporating the 5Es to maximise the care of the nephrology patient.

Renal Rehabilitation is a concept that has only been confined to the renal intermediate care facilities, including my own. The Community team follows the patients up at home three times after discharge from this facility, at one month, 3 months and six months with effect. However this did not address the rehabilitation needs of the outpatients.

In an attempt to highlight the rehabilitation need to the multidisciplinary team, the community team approached the consultants and the physiotherapists of that time, for advice. This was met by "that will be a big undertaking, let us deal with the intermediate care facility first then we will look at that later". During one of its' literature reviews the team came across a holistic rehabilitation tool, Education, Encouragement, Exercise, Employment and Evaluation (The 5Es), as recommended by the Life Options Rehabilitation Advisory Council of America and decided to incorporate it into all their education programmes and in all the assessments that were carried out both in hospital and at home.

This has provided our team with a holistic approach to care for all our patients and hence we have made a difference to the well-being of our patients without spending any extra money.

A COLLABORATIVE APPROACH TO IMPROVE PATIENT OUTCOMES USING A DIABETIC FOOT ASSESSMENT TOOL

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Problem

Anecdotal evidence within practice on the 27-bedded nephrology ward highlighted an increase in diabetic foot complications often leading to amputation. Diabetes is now the most common cause of end stage renal disease and therefore the number of renal patients with diabetes related problems is increasing. Preventative measures using an assessment tool have been initiated to improve outcomes for renal diabetic patients.

Design

The assessment tool is evidence based and designed by a nephrology and vascular nurse. Every diabetic patient on the nephrology ward is now assessed on admission. The tool includes taking a verbal history, visual observation of skin condition, temperature and colour, sensation assessment using a monofilament and vascular assessment of pulses present. The level of risk is categorised and referral made to relevant treatment guidelines. A standard core care plan is used for each patient.

Findings

The tool was audited after six months. 35 patients have had the assessment completed. Only two patients have had an amputation in this time but were late referrals with extensive complications. A staff questionnaire on the usage of the tool led to some minor alterations.

Conclusion

Through the collaboration of the nephrology and vascular nurse and liaison with the diabetic nurse patient outcomes are improving. With health promotion, patient and staff education early recognition of complications and prompt referral for treatment will have an impact on patient's quality of life. The use of this tool has now become trust wide policy across three sites and data continues to be collected.

ADVANCED NURSE PRACTITIONER TRAINING: THE DEVELOPMENT OF A COMPETENCY BASED HOLISTIC AND NEPHROLOGY SPECIFIC PATIENT ASSESSMENT DOCUMENT

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The role of the Advanced Nurse Practitioners in nephrology is still being defined. Currently this varies from running nurse-led initiatives in the outpatients setting or carrying out invasive procedures in the wards. The training prior to appointment to this very important role varies with each university or each renal unit. This is exacerbated by the lack of nephrology specific, holistic assessment tools, which provide a concrete base for training confident practitioners who positively impact on patient outcomes. In an effort to bridge the training gap the author set out to design a document that addressed this problem, to meet her own educational and training requirements. This was well supported by the consultant nephrologist whose role it was to direct the author through her course. The document breaks the consultation process into small manageable chunks, which are signed off after completion by the learner and their mentor before moving on to the next topic. It also covers the different investigations and when they are indicated. This not only boosts the learner's confidence but also structures the learning process. The document was instrumental in equipping the author with holistic and systematic history taking and patient examination skills. It is now being used by the consultant nephrologists for training the medical students and has also been recommended for use in training the staff in our Renal Assessment Centre.

SIMPLE GOOD AND SAVE - ONE PRIMING METHOD FOR ALL DIALYZER TYPES

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The dialysers have to be primed according to the prescription of the producer. That means individual priming time if different dialyzer types are used, but in practice each unit uses only one priming method for all dialyzer types and systems. To find out the effective method 3 priming methods were tested:

- I. Priming with 500 ml isotonic saline (IS) in recirculation modes.
- II. Priming with 1.000 ml isotonic saline. The first 300 ml were rejected and were primed with 700 ml in the recirculation mode.
- III. Priming with 500 ml isotonic saline in recirculation mode and immediately before starting the treatment the systems were rinsed with 250 ml fresh IS.

The diminuation of the markers Ethylenoxide (A), Glycerin (B) were measured:

Method	1		2		3	
	A [mg]	B [mg]	A [mg]	B [mg]	A [mg]	B [mg]
100ml patient	6.0 ± 0.5	184.24 ± 5.07	4.0 ± 0.3	0.13 ± 0.06	2.0 ± 0.3	0.23 ± 0.03
Extract	11.0 ± 0.2	93.66 ± 3.43	2.6 ± 0.1	0.97 ± 0.29	2.0 ± 0.3	0.23 ± 0.03
Sum	17.0 ± 0.7	278.38 ± 7.15	6.6 ± 0.4	2.20 ± 0.35	4.0 ± 0.6	0.23 ± 0.03

Conclusion
Method 3 has the best elimination of all marker substances, each dialyzer can be primed safely and cheaply.

PREDIALYTIC EDUCATION PROGRAM: PRELIMINARY REPORT

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Aim of this investigation is to evaluate the effects of a Predialytic Education Program (PEP) on dialytic outcome (acute vs planned start; definitive treatment modality) of a cohort of 51 uraemic patients (pts) in RDT from 01.01.2000 to 12/31/2002 in our centre. The pts were assigned into two groups:
A) pts who received generic information: Males = 80%; n = 21; aged: 59.14 +/- 14.32 (mean +/- SD); Females = 20%; n = 5; aged: 51.40 +/- 18.92;
B) pts who followed a well scheduled PEP: Males = 52%; n = 13; aged 67.38 +/- 16.86; Females = 48%; n = 12; aged 66.08 +/- 10.34.
The obtained results were the following (in A group vs B Group):
Early referral: 50% vs 84%; Acute access 38% vs 8%; Definitive Access at first Dialysis 58% vs 92%; Modality of definitive Dialysis: Peritoneal Dialysis: 19% vs 40% (Haemodialysis: 81% vs 60%).
Conclusion: A well scheduled PEP causes: (1) increased use of permanent access at start; (2) increased number of pts with planned start; (3) better knowledge of own disease and of possible therapeutic choice of treatment (Peritoneal Dialysis vs Haemodialysis). Greater percentage of Peritoneal Dialysis as first choice therapeutic program in informed pts.

MEETING THE DIFFERENT NEEDS AND EXPECTATIONS OF SOUTH ASIAN PATIENTS IN THE AREA OF ORGAN DONATION AND TRANSPLANTATION

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Our unit serves a South Asian Community that is over-represented on the transplant list. There was a need to address the different educational and support needs of this community in an effective manner.

The paper provides an up-date and describes with colleagues the experience and approach of a dedicated transplant co-ordinator for this community in raising awareness of organ donation, and transplantation.

Culturally sensitive educational material has been developed, and is available nationally. Information in the patients own language was provided. Spiritual beliefs and culture are persuasive in pursuing the overseas Living Donor Transplantation option, although there are ethical and legal implications. Much work has been undertaken with the Asian Kidney Patients Association, (AKA). The writer has also sought to meet their needs through fair representation on national groups determining the future of renal services in the country. Community fora and events for educational purposes have been organised. This also facilitated work for the Government's South Asian Organ Donation Campaign, where again culturally sensitive information was produced, and delivered in an accessible manner. There has been excellent feedback from the AKA. The results of the Campaign are unfolding but Poonia et al report that the community open fora are beginning to effect change in the hardest to reach groups. In a multicultural renal world, there is a need to meet the differing needs of minority ethnic groups in specific ways and this is supported by our Governments current policy initiatives, and by the *Human Rights Act 1998*.

ASSESSMENT OF DRY WEIGHT BY USING BLOOD VOLUME MONITOR

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In haemodialysis, accurate assessment of dry weight remains a major problem. Long-term inaccurate assessment of dry weight can lead to persistent volume overload, hypertension, left ventricular hypertrophy, and increased risk of cardiovascular mortality. If dry weight is set too high or too low, the patient might remain overloaded or suffer hypotensive episodes, experience malaise, cramps, and dizziness.

To assess the patient's dry weight is an essential skill of the dialysis nurse. Dry weight is often determined on a trial-and-error basis. Blood Volume Monitor is a very useful tool to assess dry weight accurately. A blood volume monitoring graph can clearly indicate the hydration state of a patient. UF rate can be increased or decreased during the session accordingly to achieve the true dry weight.

A Fresenius 4008 machine with a blood volume monitor has been used in our unit. BVM can be used in connection with sodium profile and cool temperature dialysate to maximize the effectiveness of ultrafiltration. It is possible and safe to reduce dry weight by 2 kg or even more during one session. A form is designed to record the parameters during the session.

A folder containing the research and theory information of BVM has been compiled for staff education and disseminating knowledge. BVM recording forms are kept in the folder for self learning and exchanging knowledge of the practice among the staff.

BVM is a reliable and useful tool to assess dry weight on an objective basis. It has improved patient's care and patient's well being.

DIALYSIS AND RADIATION

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In July 2002 we were confronted with two dialysis patients who due to thyroid disease needed treatment with radioactive iodine.

Ten years ago a colleague of ours performed dialysis treatment on a patient who had been treated with radio-active iodine. Based on her experience we made a plan. When we started we had no written information available on this treatment. It appeared that world wide only three cases had been recorded.

The treatment was performed in cooperation with a nephrologist, a clinical physicist, a medical technician and the staff of the radiotherapy ward. The physicist informed us of the effects of radiation. The largest chance of contamination of the nurses was during connection and disconnection of the patient to the dialysis machine.

First we explained to the patient the procedures regarding the dialysis treatment. Dialysis was started 24 hours after the intake of the iodine capsule. The physicist repeatedly took samples of blood and dialysate to measure radiation reduction. Samples were also taken to monitor the mineral blood levels because of the extended duration of the dialysis.

The first patient was treated twice, firstly for a period of seven hours followed by a second period of three hours. She had to remain in isolation for five days.

The second patient was treated just once for a period of four hours and had to remain in isolation for three days.

During this process we drew up a protocol to assure written information would be available for future cases.

ROLE OF BLOOD VOLUME MONITORING IN PATIENT CARE: A CLINIC PERSPECTIVE

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One of the problems with volumetric dialysis treatments is patient tolerance of the procedure and hypotension. Our clinic used a non-invasive monitoring instrument to try to improve this and to also decrease other potential problems.

Our objectives were to:

- 1.Reduce hypovolemia and hypotensive episodes.
- 2.Reduce potential for cramping.
3. Recognize at-risk patients who are actually volume overloaded.
- 4.Establishing or re-establishing optimal weights.
- 5.Recognizing patients who have adequate residual function or other conditions that warrant careful fluid removal and ultrafiltrating them comfortably,ie: pregnant patients, non-UF patients.
6. Reducing hospitalisations.The monitoring device was used and all clinical staff were involved. Patient care technicians report abnormal to charge nurse.

Impact on practice: Fewer hospitalisations. No disequilibria. Re-established optimal weights after co-morbid conditions evaluated. Use of the instrument in our clinic has allowed us to achieve the above objectives and increased the safety of our clients during their dialysis treatments.

IMPROVING THE SERVICE TO DIABETIC RENAL PATIENTS ON HAEMODIALYSIS

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Background: Diabetic haemodialysis patients with poor glycaemic control. Patients attending for dialysis plus separate Diabetic and Renal clinic appointments to see the Dietitian and/or Diabetic Specialist Nurse (DSN). Patients reported discrepancies in dietary advice given by individual specialists leading to confusion and no improvement in glycaemic control or well-being.

Aim: To improve patient centred care balancing renal, diabetic control and quality of life needs. To provide a cohesive holistic service to help reduce costs of time and money to patients and the NHS.

Design: Patients identified by haemodialysis nursing staff. Patients consent to the joint interview, an agreed time is planned either pre/post dialysis session or a clinic appointment. The consultations are held between the patient, relatives, renal dietitian and either the DSN or diabetes dietitian. Documentation is completed and communicated with the renal unit nursing staff. The DSN also do home visits, so providing follow up in a non-medical environment.

Findings: Improved closer working between specialties has reduced discrepancies in advice given to patients. HbA1c results remain the same but there are now less extremes of range i.e. less hypo- and hyperglycaemic events. This has been achieved by providing two different insulin regimes for patients - one specifically for dialysis days.

Conclusion: Joint consultations have produced an increased understanding of each of the specialties between the health care professionals and therefore benefited patients. Patients prefer the improved service as it leads to better care; improved quality of life and less time spent actually at the hospital and associated costs.

CHANGES IN THE POLICY FOR PREVENTION OF HEPATITIS B IN PATIENTS ON HAEMODIALYSIS

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Hepatitis B virus infection is a recognized risk factor in chronic HD patients. It is important, therefore, to implement active immunization as part of a preventive program for dialysis patients. The response rate of HD patients to vaccination varies. In spite of the numerous modifications in vaccination protocols, most studies show a low rate of response.

Until lately, routine vaccination was not performed in our hospital based HD unit due to both low expectancy of sero-conversion and absence of carriers; only universal precautions were taken. With the recent enormous influx of immigrants from endemic areas such as Africa and the former Soviet Union, it became essential to immunize our HD patients.

Methods: 33 chronic HD patients with average age of 61.3 yrs were eligible for receiving the recombinant Engerix-B vaccine. Vaccine schedule: double dose of 20 mcg (40 mcg) by injection into the deltoid muscles of both arms at 0, 1 and 6 months. No adverse reactions were observed.

Results: among patients who completed the immunization protocol, 78 % demonstrated sero-conversion although 74% had reached a sero-protective level of antibodies (>10 mIU/ml). Of the remaining 22%, after receiving additional booster, 8% demonstrated sero-conversion but only in 4% sero-protection was induced. Parameters such as nutritional status, gender, body weight, age and diabetes, did not significantly affect level of response.

In conclusion, given the success of our updated prevention policy, we plan to continue this strategy of immunization and spread it to our patients on peritoneal dialysis who are potentially future haemodialysis patients.

AN AUDIT OF NURSE COMPLIANCE WITH A NEWLY-DEVELOPED CONNECTION AND DISCONNECTION PROCEDURE FOR PATIENTS WITH VASCULAR ACCESS

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Aim of the study

To determine the level of compliance amongst haemodialysis staff with the use of a new line connection and disconnection procedure for patients with central venous catheter (CVC) access. The procedure was developed in response to unacceptable levels of Methicillin Resistant Staphylococcus Aureus (MRSA) bacteraemia in patients undergoing haemodialysis via a CVC.

Methods

An observational audit and structured questionnaire was used to audit a convenience sample of 13 Registered Nurses and 4 Health Care Assistants in the haemodialysis unit whilst undertaking both the connection and disconnection procedure (= 17 connection and 17 disconnection procedures). A covert observational technique enabled the investigator to measure staff compliance to all aspects of the protocol. The structured questionnaire generated user feedback related to the ease of use of the new procedure.

Results

There were 5 incidences of non-compliance in both the connection and disconnection procedures. Non-compliance rate to the procedure was therefore 29.5%. In response to the semi-structured interview, all staff involved in the audit indicated an understanding of the rationale for using the new procedure. All respondents stated the need for supervised practice before being competent to perform the procedure. 13 respondents stated that the procedure is time consuming.

Discussion

The results demonstrate a degree of non-compliance to some aspects of the procedure. Staff are clearly aware of the rationale for using this change in practice. A review of the procedure should be considered to reduce the number of user to patient actions.

SUPERIOR VENA CAVA SYNDROME CAUSED BY INTERNAL JUGULAR INDWELLING DIALYSIS CATHETERS

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Vascular thrombosis is a complication of temporary dialysis accesses. Previous studies have emphasized the superiority of the internal jugular approach over the subclavian one with regard to the above complication (Nephron, 1990; 54:155-161). In 2002 during 108 Permanent Dialysis Access Catheters were placed in our institute using the jugular approach. Three patients presented with head swelling and underwent angiography, which revealed thrombosis of the superior vena cava. The access was immediately removed and systemic anticoagulation therapy was initiated. Swelling was subsequently decreased and haemodialysis access was re-established by a femoral vein catheter. However, two patients died within two months following the event due to sepsis and access failure. In conclusion: vascular thrombosis is a potential fatal complication of dialysis catheter cannulation even when the jugular approach is used.

CATHETER HANDLING AND MICROBIAL CONTAMINATION OF CATHETER CONNECTIONS

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Bacterial contamination through the lumen of central-venous catheters (CVC) for haemodialysis (HD) is a complication in HD patients (Pts). EDTNA/ERCA's Vascular Access Study confirms that Double Lumen Catheter (DLC) have significant higher infection rates than Single Lumen Catheter (SLC). We discussed the use of a sterile disposable extension between DLC connectors (DLCC) and the blood tubing as for SLC and ports. DLCC are exposed to > 6 connections/connector/HD, blood spills, frequent disinfecting and cleaning. We checked the level of contamination of our DLCC after 4 -6 hours of HD. **Material and methods:** We connected 10 cm long sterile extensions (SE) to the DLCCs before each HD. Handling was done distal on the SE reducing direct manipulations on the DLCC. From 25 HD in 6 Pts over 9 days we collected 50 proximal and 50 distal connectors of SE post HD for standardised microbial testing. Access complications during HD were monitored in a protocol.

Results: 28/100 samples were contaminated, showing 1 - > 20'000 Colony Forming Units (CFU)/ml. 21/28 had coagulase negative Staphylococcus, 3 Streptococcus, 1 Staphylococcus aureus. Proximal and distal SEs were equally contaminated, however results were only very high on distal SEs. No relation was found between flow complications, intensive handling and positive results or count. **Conclusion:** Despite the use of sterile material and non-touch technique a sensible rate of contamination was found, however the sterile extension moves the contamination to a disposable.

BREAKING A VICIOUS CIRCLE : DECREASING DIALYSATE NA TO 138 MEQ/L AND REDUCTION OF INTERDIALYTIC GAIN

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Background: High dialysate Na concentration (HNa) is helpful in stabilizing intradialytic blood pressure (BP) and enabling high ultrafiltration volumes (UF), which may be associated with hypotensive episodes and decreased intradialytic tissue perfusion. However, HNa was suggested to be associated with increased post-dialysis thirst, which may lead to increased interdialytic weight gain (IDWG), interdialytic and pre-dialysis (pre-D) volume overload, increase in blood pressure (BP) and a subsequent vicious circle. For this reason we decided to reduce Na dialysate levels from high HNa (Na levels >140 meq/l) to 138 meq/l.

Methods: We analysed the changes in IDWG, UF, and pre-D and post-dialysis (post-D) weights (Wt), in HD patients with average IDWG >1 Kg/day.

Results: High IDWG was observed in 2/3 of the patients. Reducing dialysate Na to 138 meq/l in these patients was associated with a slight decrease in Pre-D Wt (NS), no change in Post-D Wt and significant decrease in UF-25% and IDWG-21%, and enabled less additional dialysis due to fluid overload: from 5.8/month to 3.75/month.

Pre-D Wt -Kg		Post-D Wt-Kg		UF-Kg		IDWG-Kg/day	
High	138	High	138	High	138	High	138
71.3	70.9	68.6	68.7	2.68*	2.12	1.23**	0.97
±13.5	±13.9	±13.6	±13.5	±0.51	±0.57	±0.26	±0.33

*p<0.001, **p<0.0005

Conclusions: In patients with average IDWG >1 Kg/day, reducing dialysate Na concentration to 138 meq/L was associated with significant reduction in IDWG and UF, which might lead to reduction in the adverse effects of high UF.

VASCULAR ACCESS IN POLYCYSTIC KIDNEY DISEASE PATIENTS

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The aim of the present study was to evaluate the vascular access (fistula or graft) in polycystic kidney disease patients, in comparison to other haemodialysis patients. We investigated whether the growth and duration of the vascular access, which is used for haemodialysis, were affected by the primary disease.

We studied the duration of the vascular access, as well as the number of arteriovenous fistulae operations. Furthermore, we studied the width, at the puncture sites, and length of the access, by using a pair of compasses and a ruler, in our 8 patients with polycystic kidney disease and in 8 control patients. We confirmed these figures by measuring the vascular access with a portable ultrasound unit, which had a 7.5MHz probe for short focus. The patients' sex, age, time on haemodialysis, duration of session, haemoglobin and blood pressure levels were similar in both groups.

The polycystic kidney disease patients had a significantly lower access width than the control patients: 17 (12-21)mm versus 21 (15-29)mm at the arterial insertion site, and 16 (5-21)mm versus 21 (12-30)mm at the venous site. The duration of access, the time it was actually punctured, seems to be shorter in the first group of patients. The polycystic kidney disease patients had undergone more arteriovenous fistulae operations in order to have a vascular access that could be used for dialysis.

EVALUATION OF A DIALYSIS NURSE PRACTITIONER ROLE

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There is emerging worldwide trend to develop and examine a diverse range of nurse practitioner roles in public health practice. A haemodialysis unit with the sponsorship of government has developed and implemented a Nurse Practitioner Role in maintenance haemodialysis over two community dialysis centres. A nurse practitioner is defined as an experienced nurse that uses extended practices (such as prescribing medications, ordering diagnostic tests, referrals to specialists, admitting rights and writing leave of absence certificates) in their area of practice. The purpose of this presentation is to describe the internal evaluation process and present data examining the relevance and effect of this role.

A pre/post-controlled method was used for this evaluation. A variety of means were used to collect data including surveys, interviews, clinical data and medical records. Patient survey, quality of life, staff interview, clinic and emergency attendances and dialysis efficiency data was collected both pre and post implementation of the Nurse Practitioner role. This presentation will outline this data comparing the parameters between the pre and post implementation phases. In establishing if the Nurse Practitioner role is safe and efficacious in this practice field, good evaluation data that adequately describes the role and compares the service to current practice is essential.

COOL DIALYSIS - HOW EFFECTIVE IS IT?

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Despite the increased technology associated with patient safety during haemodialysis, intradialytic hypotension remains a most common and distressing side effect of haemodialysis. Recently there has been increased interest in cooling dialysate temperature, reducing vasodilation associated with the increase in body temperature during treatment (1,2). This simple study aimed to identify patients that would benefit from this intervention. Patients were selected on the basis that despite the use of sodium profiling, ultrafiltration profiling and careful dialysis, with or without large fluid gains, they still experienced frequent hypotensive episodes requiring nursing intervention. Following patient consent, patients were dialysed for 1 week under their normal dialysis prescription. They were then dialysed at a dialysate temperature of 36°C for 2 weeks, then a further reduction of dialysate temperature to 35°C with no alteration in their dialysis prescription other than the dialysate temperature. Evaluation of the effectiveness of the intervention will be assessed on the number of symptomatic hypotensive episodes, the number and degree of nursing interventions and patient comfort associated with the reduction in dialysate temperature. At the time of writing the abstract, there is an indication that reducing dialysate temperature reduces the risk of intradialytic hypotension. However, some patients experienced discomfort and complained of feeling cold when dialysed against a dialysate temperature of 35°C.

LIFE QUALITY OF THE PATIENTS HAEMODIALYSED IN DIFFERENT PLACES OF EUROPE

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Quality of life is determined by many factors. It depends upon cultural, personal, psychological indices, value system etc. Haemodialysis (HD) patients with end stage renal disease who live in different countries have different culture and they are also treated in different health care systems and conditions. So have they different quality of life or rather similar because of their one renal world? The aim of this study was to compare the quality of life understood as a subjective health state of the patients undergoing HD in 4 different European countries: Byelorussia, Germany, Denmark and Poland. We examined in total 554 adult HD patients: n=291(53%) man and n=263(47%) women. The study was performed using national versions of the Nottingham Health Profile as a self-administered questionnaire. Questionnaires were evaluated in 6 aspects of life: energy, pain, sleep, emotional reactions, social isolation and mobility. The Kruskal-Wallis and U-Mann Whitney tests were used to compare scores between groups. The study pointed out the differences and similarities between the quality of life of the HD patients treated in different countries. The most striking differences were observed in the sleep and emotional reactions categories (p<0,01). We noted no significant differences between national groups of the examined patients concerning energy, pain, social isolation and mobility.

AGGRESSION AND DIALYSIS

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Aggression in chronically ill patients and in nursing staff is a well-known problem. Up to now there is only limited experience dealing with aggression in the dialysis nursing staff. In a multicentre trial (Germany, Switzerland, Austria) 332 nurses from dialysis units participated. The questionnaire included following questions 1. is aggression evident? 2. what does aggression mean to you. 3. is aggressive behaviour a problem within the staff? 4. which people show the first signs of aggression and who is affected? 5. how is aggression expressed? 6. how do you deal with aggression if somebody else is affected? 7. how do you deal with aggression if you are affected? 8. is your job the reason for aggression?. 64% of the questionnaires were answered. Aggression within the nursing staff is a problem (61% answered that aggression occurs at least sometimes). Aggression directed against patients is not present in 10% of the staff, occasionally in 55%, sometimes in 33% and frequent in 2%. There are different modalities to show aggression (verbal, body-language, violence). Verbal attacks include grumbling, threatening and mobbing and are observed in 45% of all asked persons. Body-language (to stamp one's feet, blocking, etc.) is used in 15%. Aggression resulting in violence (spitting, hitting, throwing objects) is observed in 13% to 25%, showing differences between countries. Aggression and aggressive behaviour is a problem within the dialysis staff. The individual has to be aware of his own aggression. Only in this setting can ways to deal with these emotions be developed.

SUPPORTIVE NURSING, INDIVIDUALLY AIMED AND SUITED, AS A BRIDGING TOOL BETWEEN CULTURES

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Background: Nursing teams in Israel treat patients from diverse cultural backgrounds. This requires knowledge, understanding and sensitivity to intercultural nursing, aimed at developing a professional approach to cultures, while maintaining and assimilating the old within the new (Brunner & Suddarth, 1996). The Community Dialysis Unit, subunit of governmental hospital, provides treatment for 55 patients from different demographic and cultural backgrounds. The quarterly quality control data, based on DOQI recommendations required improvement. One way toward change was identifying patients' learning requirements, providing suitable guidance programs taking into account cultural backgrounds. Aims: Promoting health of haemodialysis patients; raising staff awareness to the importance of intercultural nursing; identifying learning requirements; suiting guidance programs; providing tools; implementing acquired principals; improving response to treatment and decreasing health threatening behaviour; raising satisfaction. Process: Establishment of multi-disciplinary team; literature survey; processing data using quality control tools; setting goals; compiling group and individual enrichment programs; performing satisfaction survey before and after guidance programs; continuous assessment. Results: 90% of patients underwent guidance in 7 chosen topics; enrichment program complied in different languages; treating staff informed of importance of intercultural nursing; improving treatment quality, including biochemical data, response to medication, dietary regime, controlled weight gain between treatments; increase in patients' satisfaction. Conclusions and Recommendations: Systematic control enables identification of problems and directed intervention; personalized knowledge, use of clear language, guidance and support suited to cultural needs facilitate behavioural changes, heighten treatment response, provide better sense of control and independence, and create a learning atmosphere; involving staff in enrichment programs motivating learning.

CONVERSION OF SUB-CUTANEOUS TO INTRAVENOUS ERYTHROPOIETIN ALPHA IN HAEMODIALYSIS PATIENTS

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Reports of pure red cell aplasia have prompted a change in the recommended route for Eprex administration. Previous reports have suggested that substantially higher doses are required when epoetins are administered intravenously vs. subcutaneously. In this study Eprex administration was converted from subcutaneous (s.c.) to intravenous (i.v.) in 111 haemodialysis patients without dose adjustment and haemoglobin was monitored over 6 weeks. Median (range) haemoglobin, ferritin and percentage hypochromic red cells (%HRC) are shown in the table. Haemoglobin decreased by $\geq 1\text{g/dl}$ in 20 (18%) patients, two of whom required blood transfusions. Haemoglobin increased by $\geq 1\text{g/dl}$ in 31 (28%) patients and changed by $< 1\text{g/dl}$ in 60 (54%). There was no significant difference between the groups with respect to BMI, Kt/V, PTH or CRP. Median haemoglobin was unchanged over 6 weeks. A small but significant increase in serum ferritin and decrease in %HRC was observed. 65 of 73 patients (89%) who completed a questionnaire reported that they preferred i.v. to s.c. administration. 9 of 16 dialysis nurses (56%) reported that i.v. administration took no additional time. We conclude that Eprex administration may be switched from subcutaneous to intravenous without dosage adjustment in the majority of patients. In the next phase of this study, dosage adjustments will be made to correct haemoglobins in those patients who showed a decrease in the first phase.

Weeks	0	2	6
Haemoglobin (g/dl)	10.7 (7.7-14.1)	10.9 (7.0-15.0)	11.0 (6.3-14.8)
Ferritin (ug/l)	263 (26-1634)	261 (20-1338)	290 (45-1703)
%HRC	11.0 (1.0-65.0)	7.8 (0.5-40.6)	5.3 (0.5-39.9)

TRAINING IN SELF-CARE OF HAEMODIALYSIS PATIENTS WITH A PERMANENT CENTRAL LINE CATHETER

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Introduction

Permanent Central Line Catheter (permacath) is a frequently used and sometimes last resort for many haemodialysis (HD) patients. The most prevalent complications of this technique are local and systemic infections. Frequency of infection is closely related to rate of mortality, length of hospitalisation and cost. The most common cause of infection is neglect of the exit site as a result of the patient's unawareness of the dangers involved. Often patients arrive for haemodialysis with bandages, soiled or damp from bathing or perspiration. Our Haemodialysis Unit treats 70 patients. However, due to vascular diseases that prevent utilization of natural or artificial fistulas and age (average 67yrs), approximately 20% require permacath insertion.

Method

18 months ago, we began a training program for patients and their families. This included written and personal guidance conducted in 3 languages (Hebrew, Arabic, Russian) and a special kit for home use. Many of the Bedouin patients had been on CAPD and thus had prior successful experience of self-care. 22 patients have participated in this program to date.

Results

1. Incidence of sepsis originating from the infected exit site decreased by some 50%
2. There was a clear rise in the patients' self confidence and sense of control
3. The level of anxiety generated by the insertion of a foreign body into his own was greatly diminished

Costs for hospitalisation and outpatient treatment of permacath-related sepsis were considerably reduced

Conclusions

In addition to significantly enhancing the patients' welfare, this program has economic repercussions.

NURSING INTERVENTIONS IN THE ESRD PATIENT WITH THYROID CARCINOMA SUBMITTED TO RADIOACTIVE IODINE

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Our Unit, is an oncological hospital based haemodialysis unit, where we are challenged with rare situations, sometimes potentially hazardous to staff and patients, needing in this setting a different dialytic approach.

Radioactive iodine (¹³¹I) is a radionuclide of the iodine with a half-life of approximately 8 days, after oral administration and is primarily eliminated by the kidney. It is also first line treatment for differentiated thyroid carcinoma.

Here we describe two cases of ESRD in haemodialysis submitted to radioactive iodine treatment for thyroid cancer and the practical approach to haemodialytic treatment in this patients: preparation of the room (isolation room), safe procedures for the staff and other patients (patient and nurses wearing a lead jacket), evaluation of treatment efficacy and guarantee of safety for next patient in the same compartment and safe management of disposable materials (measuring radioactivity before and after treatment at different levels).

Levels of radioactivity were measured in the environment 1 meter away from the patient, disposable material and monitor at the beginning and at the end of treatment; levels at the dialysate were measured in the beginning, 23 minutes after and at the end of chemical disinfection.

After treatment, radioactivity of the patient was reduced to safe levels. No significant levels were shown in the disposable materials and monitor (before and after treatment). We conclude that dialysis is effective in reducing radioactivity in these patients and that the safety procedures adopted precluded significant environment contamination.

RETROSPECTIVE ANALYSIS OF 11 YEARS OF TESIO CATHETERS USE

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The single lumen subcutaneous tunnelled Tesio silicone 12 F catheter (T) (Med. Comp. Inc., Hartleysville USA) has been used in our centre as vascular access in chronic haemodialysis patients.

Objective: In the present study we reviewed the complication profile and performance of 245 catheters, predominantly inserted using a bedside technique (74.3 %).

Method: We analysed 245 T. placed and removed between 1991 and 2002. Four were excluded, lost during the first week after placement due to errors in placement procedure. We analysed the indication of placement, the average catheter lifetime, the presence of either a smooth or Dacron cuff, the localisation, infectious and thrombotic complication rate and reasons for failure.

Results: 245 catheters accounted a total of 67,665 catheter days. The median lifetime was 276 days. Although an incidence of 25.7% thrombosis was found, only 12.2% of these devices were lost. The remainder was rescued by heparin or thrombolysis lock. The incidence of exit-site infections, tunnel infections and bacteraemia were 0.35, 0.25 and 1.73/1000 catheter days respectively. Gram positive organisms predominated. The most frequent reason for catheter removal were infection (24.9%) and switch to A.V. fistula (20.4%).

Conclusions: T. are well tolerated and easily inserted percutaneously haemodialysis catheters, necessitating no hospitalisation. Because of the relatively low incidence of complications, it is an acceptable vascular access device, especially in patients with an immature A.V. fistula or those without possibility of A.V. fistula creation.

THE EXPERIENCE OF A HAEMODIALYSIS UNIT IN CONFRONTING AND ERADICATING AN EPIDEMIC OUTBREAK OF BACTERAEMIA

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Obtaining vascular access by catheterisation of central veins is a good option, especially in patients with vascular system fragility. In our department, there was an increase in infections for bacillus gram negative (BGN) in patients with long-term catheters (LTC). Our objective - to design an action plan and new working methodology in order to be able to eradicate the epidemic outbreak.

We established three periods in the prospective follow-up of LTC patients: the pre-epidemic period (01/94 to 03/99), with a bacteraemia every 144 days/patient, the epidemic period (04/99 to 12/00) with a bacteraemia every ten days/patient, and the post-epidemic period (01/01 to 04/02).

A multidisciplinary working group was established, which produced "action plans for bacteraemia" for nursing and technical staff. The service's working methodology was studied and analysed by means of a complex review (protocols, crossed contaminations, etc.).

The deionised water cultures at the entrance to the HD room were always negative. The dialyser and Hansen's cultures were positive for BGN, confirming that they were of the same genetic origin. An evaluation of the three periods was carried out, studying their working methodology, to which no changes were made between the pre-epidemic and epidemic periods. In the post-epidemic period, a number of changes were made to the care dynamic, with no other bacteraemia arising to date.

Adapting and improving protocols is an indicator of quality. The role of nursing staff is vital in the Prevention, review and action in the face of situations that may affect patient's health.

THE IMPLEMENTATION OF LINE SEPSIS PROTOCOL FOR SEMI PERMANENT TUNNELLED LINES

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Problem: Line sepsis is an increasing problem on renal dialysis units due to a reliance on semi permanent tunnelled access. Patients are at risk of metastatic infection due to recurrent sepsis. The unit infection rate was identified as being unacceptably high (10/1000 catheter day) during the period April 2000 - March 2001. There were 183 bacteraemia episodes 108 due to Staph. epi and 40 due to Staph. aureus.

Purpose: Direct aim - reduce rate of catheter infection. Indirect aim - reduce hospitalisation and morbidity due to sepsis.

Design: On review of literature several technical issues were identified. 1. Exit Site Care. Training of nursing staff in the changes made. Solutions for cleaning exit site. Dressings used to cover exit site. Frequency of doing the dressing. 2. Treatment. Line sepsis pro-forma designed. New antibiotic regime. 3. Identify access needs.

Findings: After introduction of the new procedure data has been analysed from March 2002 - August 2002, there were 50 bacteraemia episodes in the 6 month period (8 Staph. epi, 10 Staph. aureus, 18 no growths and 14 others). The overall infection rate was 6.5/1000 device days.

Conclusion: The device rate has decreased due to change in practice. Second, the infection rate has fallen as use of intermediate lines has been reduced. Further study will be made into the benefit of Mupirocin ointment (Renal Associate Guidelines 3rd edition) and the use of antibiotic lock.

Relevance: This study has wide reaching implications on morbidity and mortality in the renal unit.

IMPLEMENTATION OF AN INTEGRATED SYSTEM FOR DATA AND MEDIA ON A DIALYSIS UNIT

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Inquiries show an increase of about 300% in the use of Internet by people aged 50 years and older. An increasing number of patients want to have the possibility using Internet during their stay in hospital. The presentation of television and radio is commonly accepted as a necessary supply at a dialysis unit. In our hospital an electronic patient file (EPF) is in the end stage of development. In fact, parts of the system are already being used. When it was decided that the dialysis unit should be rebuilt and enlarged, we did research into the possibilities to offer these facilities in an integrated system. In our country such a system is not available either in hospitals in general or in dialysis units in particular. We chose a system based on Internet technology. With the help of data compression technology it is possible to present high quality television, radio, Internet and EPF on only one touch screen. An important starting-point is that patients do not need to pay for the service. The rebuilding gave us the possibility to adjust the infrastructure. Fully guaranteed data security is essential. Therefore we didn't select wireless connections but choose standard Ethernet cables. In spite of standard cabling one could still not give a 100% guarantee. For this reason we decided to phase the implementation of the system. In the first phase, the pilot phase starting 10th of March 2003, we will offer the system physically separated from the hospital network. Evaluations are scheduled monthly.

THE PROBLEM OF THE CENTRAL VENOUS TUNNELED CATHETER INFECTIONS. A PREVENTION PROTOCOL

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Introduction: One of the most dangerous complications related to tunnelled central venous catheter (CVC) for haemodialysis is bacteraemia, and the presence of fibrin in the CVC may promote bacterial growth.

Objective: Aim of this study was to evaluate the hypothesis if a periodic fibrinolytic treatment with urokinase would be able to reduce the incidence of bacteraemia.

Material and methods: All the patients with a tunnelled CVC (n=28) were treated once a month with urokinase 6125 U diluted in saline infusion into the catheter for at least two hours; after that it was aspirated and filled with pure heparin.

Results: During the one year study we observed 3 bacteraemic episodes in 8608 days/catheter, equal to 0.34/1000 days versus an incidence of 0.9/1000 days/catheter of the last year.

Conclusions: The periodic treatment with urokinase of tunnelled CVC may reduce the incidence of bacteraemia.

NURSING CARE OF ACUTE RENAL FAILURE ON INTENSIVE CARE UNITS WITH SLOW EXTENDED DAILY DIALYSIS

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Background:

Until recently an acute renal failure patient admitted to the Intensive Care Unit (ICU) was treated with intermittent haemodialysis, 4 hours by 1 nurse. Because dialysis is needed in 3 ICU's at the same time SLEDD (6h/day) permits the treatment of several patients by 1 nurse.

Methods:

1 dialysis nurse takes care of the dialysis parameters of several patients on different locations. On a mobile telephone dialysis alarms are shown. The ICU nurses are responsible for the cardiovascular monitoring.

Results:

Of the acute dialysis treatments in 2002, 55% were intermittent, 31% SLEDD and 14 % CVVH (continuous veno-venous haemofiltration). 40 of these treatments were studied for the delivered dialysis dose in 11 patients. 20 during 6hr SLEDD and 20 CVVH, 11 with 1 L (liter) and 9 with 2 L substitution/h. Urea removal was 40 g/treatment in SLEDD, 26 in CVVH 1L and 46 in CVVH 2L. Urea clearance was 43 L/treatment, 22 and 38. Kt/V was 1.3, 0.5 and 0.5. URR was 64%, 16% and 13%. The dose of fraxiparine was only 25% more with SLEDD than with IRRT. The quality of blood restitution was excellent in 88% of SLEDD and in 68% of IRRT. The haemodynamic tolerance of SLEDD was excellent and comparable to CVVH.

Conclusions:

SLEDD allows treatment of several patients by 1 nurse. The delivered dose is equal for CVVH with 2 L substitution and for 6hr of SLEDD. CVVH asks more interventions from ICU nurses and is more expensive than SLEDD.

CHILDREN & ADULTS: MAJOR DIFFERENCES IN CULTURE IN ANY COUNTRY

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The transition from a paediatric dialysis centre to an adult centre is for both patient and parents a change to a completely different culture. The quality of this transition can only be guaranteed by the paediatric centre itself. This is the conclusion of a survey made in all the adult dialysis centres in this country. The response to the survey was 82%.

Aim: To get insight into the approach of nurses in adult centres towards patients coming from the paediatric centre and how to guide both patient and parents.

Method: All departments were sent questionnaires concerning initial introductions, transfer, patient autonomy, study and recreational facilities, choice of group, training of nurses and expectations towards the paediatric centre.

Results: 85% of the respondents thought the study useful and are interested in its recommendations. Opportunities for education are rarely available, dialysis schedule must therefore be adjustable. Nurses expect additional training from the paediatric centre. For the parents only a supporting role exists, the patient is now fully responsible for himself. For our own centre we gathered information from the "medical treatment law" where the right to decide ones own treatment at the age of 16 is a major issue.

In the plan to take on the problem information about this law is available in addition to guidance for the transition to the adult centres and guidelines on this topic for the paediatric dialysis nurses. The official introduction leaflet for our dialysis centre includes the vision of the department and its strategy towards patients on the way to their right of patient autonomy.

HOLISM - A WAY OF IMPROVING SELF IMAGE IN CHILDREN ON DIALYSIS

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Background: the holistic approach acknowledges body and spirit as a single entity. Applying this approach in children means relating to their personalities and to normal aspects of their lives. In order for this holistic approach to be effective, it is necessary for the nurse to believe in the method, to think creatively and to give of herself above and beyond the standard.

Goals: 1. Bringing the healthy world into the dialysis unit.

2. Turning the passive child into an active one.

3. Minimizing emotional damage that comes with having a chronic illness.

Process: organizing various activities, coordinated by the head nurse such as; sports, art therapy, trips, unit newspaper, parental support meetings, celebrating b-days and keeping the unit lively.

The influence of the holistic approach - in order to determine the effects, a questionnaire was distributed to 12 children (ages 9 - 19) on dialysis. An identical questionnaire was given to a control group of 12 healthy children. Contrary to previous results, no significant differences in the children's self image were found for the 2 groups.

Conclusion: treating children is an art directed to maintaining the spark, innocence and enthusiasm that typifies children. A nurse must be able to gain the trust of the child by finding the proper approach. The holistic approach helps the child and caregiver walk together down the long and difficult road of dealing with the infirmity.

DOMICILIARY PAEDIATRIC PERITONEAL DIALYSIS. EDUCATIONAL PROGRAMME

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Introduction: Domiciliary peritoneal dialysis as an alternative treatment for renal children improves the quality of life of patients and caregivers, it is better for social and family life and returning to school. The general aim of our study: to train the caregivers & patients in procedures, treatment and solutions of associated problems. The specific aim: to elaborate an educational programme which includes all necessary materials and records in a simple and interesting language adapted to their cognitive level.

Methods: Prospective descriptive study. All our patients between 2 months and 17 years old undergoing peritoneal dialysis (double bag & dialysis machines). A middle-low economic-socio-cultural level. Our hospital is a reference centre as a unit of paediatric dialysis. It has a nephrologist and a nurse shared with the hospital. Exhaustive bibliographical search was conducted for the production of the programme, materials, records...

Results: During one year (job outside working hours) was developed: cares guide, protocols, procedures, records, nursing histories, questionnaires and evaluation - (34 items). From April 1996 to April 2000, 43 caregivers followed this program (a range of 5 to 12 per year), 38 of them were mothers. All of them performed the techniques, treatment and questionnaires correctly after 35 hours training with the double bag and 30 hours on the machines. Monthly follow-up and evaluation. Domiciliary visits when the management approved it. The programme is updated as changes appear in techniques and associated aspects.

Conclusions: The educational programme improves self-respect, guarantees and promotes self-care, improves the treatment fulfilment, allows a more appropriate dialysis, provides more autonomy, facilitates social and family life and returning to school thus restoring a more normal daily life and improving the quality of life.

CAN HEPATITIS B AND C INFECTIONS CONTAMINATE BECAUSE OF DRAINED DIALYSATE IN CHRONIC PD TREATMENT

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Hepatitis B and C virus infections are serious health problems in chronic dialysis patients. In this study, the drained dialysate is analysed, to discover if it could be a source of infection in CPD patients.

This study contains 19 (Group 1) patients whose anti- HCV were positive, and HBs Ag negative and another (Group 2) 8 patients, whose HBsAg were positive and anti- HCV negative. Total 27 CPD patients (15F, 12M; Mean age: 40.2). In group1, HCV-RNA and in Group2 HBV-DNA were analysed in their blood and in their 24 hour collected dialysate samples. In anti- HCV and HBs Ag analysis the 4. generation ELISA method was used, and in HCV-RNA and HBV-DNA analysis the PCR method were used. The HCV-RNA in the dialysate and blood samples were positive in 9 patients out of 19 (47.4%) in Group1, the HBV-DNA analysis were negative in all 8 patients in Group 2. Result, in our study it is understood that the patients who carry HCV-RNA, can easily spread the disease with their drained dialysate. This shows us that the drained dialysate liquid and the bags create a high risk for social health and demonstrates the great importance of patient training about this information.

OUR INFECTION STATISTICS ON INTRA PERITONEAL INSULIN ADMINISTRATION IN INSULIN DEPENDING DIABETES MELLITUS END STAGE RENAL DISEASE PATIENTS FOR 2001 AND 2002

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The frequency of diabetic nephropathy, as a primary cause of renal failure, is almost 40% in the USA and about 25% in Europe. Giving these patients the best possible therapy for both diseases, diabetes and ESRD, is one of our major preoccupations. Part of our IDDM-CAPD patients are treated with an IP-insulin administration. Literature does not show more infections for IP administration in comparison with subcutaneous (SC) insulin injection. Most of the colleagues still fear the increasing infection risk.

Looking over the statistics of 2001-2002 we did find following results. 52 patients with 470,6 month-patient, 13 of these patients were diabetics (25%) with 116 month-patient. 8 diabetics were on SC-insulin treatment with 78 month-patient and 5 diabetics on IP-insulin treatment with 38 month-patient. The glycosylated haemoglobin levels (HbA1C) of our patients on IP-treatment did indeed decrease (= better prevention). We counted 20 episodes of peritonitis in the non-diabetic group and 7 in the diabetic group. 3 of these 7 episodes appeared in the IP-group and 4 in the SC-group. The HbA1C-levels in the SC-group stayed high.

Our statistics, despite the small sample size, show no more peritonitis in the IP-group than in the SC-group, but we gained a much better DM treatment.

Better control and easier insulin adjustments will prevent the appearance of dangerous DM complications.

Refining the diabetes therapy to prevent, without extra risk for infections, these life-threatening complications decreases the morbidity and mortality and increases the personal liberty and the quality of life of our IDDM-ESRD patients.

AN ESCAPE FROM ISOLATION: A SUPPORT GROUP FOR WOMEN ON PERITONEAL DIALYSIS

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Introduction: Contrary to haemodialysis, peritoneal dialysis (PD) is undertaken in the privacy of home. Apart from the immediate family and supporting hospital-based clinical staff, the patient is basically on his/her own. To break this cycle of isolation we decided to establish a trial support group for women on PD, on the hypothesis that women bond more easily and share their thoughts more openly.

Patients and method: Group of 8 women aged 43-66 years, >1 year on PD, including 2 blind patients and 3 cared for by their husbands. Over a 3 months period, 8 meetings were convened for 2 hrs each time, in an informal environment outside the department. Staff: PD nurse and social worker.

The process: The women became acquainted. They described how they coped with their disease and how their family responded to their illness and the burden of treatment in the home. Main issues brought up: coping with their body image and the implanted catheter, reliance on their husbands' care, relations with their children, conjugal relations and sexuality, relations with medical staff.

Conclusions and recommendations: Clearly the supportive social environment allowed these women to release hitherto hidden emotions of fears and frustrations through free interaction with fellow sufferers. The raising of mutual problems and offered solutions, supplied valuable tools for coping with the everyday difficulties incurred by their specific physical condition. The women asked to continue these meetings.

We recommend the continuation of this program with the participation of the patients' spouses.

STAPHYLOCOCCAL INFECTIONS IN PERITONEAL DIALYSIS, SCREENING AND PREVENTION

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Peritonitis and catheter infections remain a major complication of peritoneal dialysis. The most common source of infection is contamination with predominantly Gram positive skin flora. 40-65% of all peritonitis are caused by *S. epidermitis*. 20-35% of all exit-site infections are caused by *S. aureus*.

The aim of this study is to determine the role of *S. aureus* and *S. epidermitis* as causative agents of peritonitis and exit-site infections.

In our unit, the rate of peritonitis caused by *S. epidermitis* declined from 0.27 episode/patient/year in 1999 to 0.17 episode/patient/ year in 2002. During this period we had only one episode of *S. aureus* peritonitis.

The frequency of peritonitis worldwide is 0.3-0.7 episode /patient/ year. In our unit the rate of peritonitis declined from 0.54 episode/ patient/year in 1999 to 0.43 episode/ patient/ year in 2002. The rate of exit-site infections caused by *S. aureus* increased from 0.11 episode/patient/year in 1999 to 0.2 episode/patient/year in 2002. The rate of *S. epidermitis* exit-site infection increased from 0.07 episode/ patient/year in 1999 to 0.27 episode /patient/year in 2002. These outcomes increased significantly the rate of exit-site infection, from 0.47 episode/ patient/ year in 1999 to 0.78 episode /patient/year in 2002.

In order to reduce the incidence of Staphylococcal infections, 40 patients have been screened before the insertion of Tenckhoff catheter since July 2002. *S. aureus* carriers (28%) received prophylaxis before and after the insertion of the Tenckhoff catheter, using two different protocols. Knowledge of epidemiology and pathogenesis of these infections is essential to design effective prevention and control strategies.

PD EXIT SITE INFECTIONS (ESIS) AND PERITONITIS

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Nearly 20% of patients requiring renal replacement therapy in England and Wales are maintained on peritoneal dialysis. Complications of treatment include peritonitis and catheter exit site infections (ESIs). Rates of ESIs range from 0.05-1.02 episodes/patient/year and are responsible for direct catheter loss in 12-27% of cases. ESIs and tunnel infections have been estimated to give rise to 2-8% of peritonitis episodes. In this study we have assessed the number of peritonitis episodes directly caused by ESIs, the relationship between the microorganisms causing ESIs and peritonitis, and predictors of peritonitis episodes and their subsequent outcomes. We studied 167 patients (52%M/48%F; mean age 52) over a 15-month period. Peritonitis rates were 1:19.6 catheter months. ESI rates were 1:13.7 catheter months. In peritonitis patients, the average no. of ESIs was 1.4 per patient, and in non-peritonitis patients, 0.6 ($p=0.028$.) There was a mean of 13.5 days between an ESI and the onset of peritonitis. 16% of peritonitis episodes were directly caused by an ESI. ESI bacteria and peritoneal fluid bacteria correlated in 71% of cases; 76% of these were *S.aureus*. 22% of all peritonitis episodes resulted in transfer to haemodialysis, 3% died and the remainder were cured. The relative risk of peritonitis correlated with the number of ESIs. In summary there is a direct association between the number of ESIs and risk of development of peritonitis. *S. aureus* is the commonest linking organism. These data indicate directed risk stratification may be useful for the management of ESIs.

CLINICAL OUTCOMES OF APD VS. CAPD

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APD has been used as an alternative treatment to CAPD since the early 1990s. Advantages over CAPD include offering patients a dialysis free day and allowing clinicians flexibility in altering dialysis prescription and monitoring compliance. However, there is little evidence as to whether it actually has an effect on long term outcomes. We looked at 109 CAPD patients who had converted to APD for reasons of choice (51%) or clinical need and compared clinical information pre and post commencement of APD. Clinical need was analysed further as UF failure (29%), poor adequacy (48%), interstitial leakage (6%) and compliance reasons (17%). The patients were equally matched for sex (56% male) with a mean age of 41 years. No. of patient days on CAPD was 68,548 and on APD was 42,040. We found that peritonitis rates were significantly better in the CAPD period compared to that of APD (in 28 patient months vs. 1 in 18). There was no real difference in biochemistry and albumin levels were 34g/l in both groups. Dialysis prescription was tailored on APD to ensure optimum adequacy. This gave a mean Kt/V of 2.2 post conversion compared to 2.0 pre conversion. This was despite a fall in residual renal function Kt/V after changing to APD from 0.4 to 0.2. Transporter status was measured pre and post conversion and remained consistent. In conclusion, in a cohort of patients who converted from CAPD to APD, peritonitis rates were increased, but in contrast, APD confers benefit through improved adequacy.

NEW TECHNIQUE OF IMPLANTATION OF A PERITONEAL CATHETER

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The aim of this prospective non-randomised study (from 01.2000 to 12.2001) was to evaluate a new technique of percutaneous insertion of peritoneal catheter assisted by laparoscopy technique. This technique was compared with standardized laparoscopic placement. The laparoscopic placement has a number of advantages comparing with laparotomic and "blind" percutaneous insertion. Higher incidence of early leak remains the disadvantage of standard laparoscopic insertions compared to mini-laparotomy. Aiming to reduce the early leak incidence led to the development of percutaneous insertion assisted by laparoscopy. In 24 patients with ESRD the standardized laparoscopic technique (A) was used. In 18 patients the percutaneous insertion of peritoneal catheter assisted by laparoscopy (B) was performed. Double-cuff Tenckhoff coiled catheter was used. Mean age group A was 59.2±10.3 years, group B - 54.8±14.0. No significant difference in nutritional parameters was found. Mean hospitalisation period group A was 19±5.7 days versus group B 12.1±4.3 days. Early leaks after the implantation of peritoneal catheter were found - Group A in 58.3% patients (n=14); Group B in 11.1% (n=2). Late leak was developed in one patient in group A, no late leak was found in group B. Early infection of subcutaneous tunnel was not recorded. Catheter dislocation was found in-group A in 16.6% and in-group B in 11.1% (ns). It appears that the new described original technique combines the advantages of both laparoscopic and percutaneous methods of implantation of Tenckhoff catheter and ensures provable reduction of the early leak incidence.

STABILITY OF ANTIBIOTICS IN PERITONEAL DIALYSIS FLUIDS AND THE IMPACT OF AN ALTERED PD PERITONITIS TREATMENT SCHEDULE

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Peritonitis remains a significant cause of morbidity and mortality in patients on peritoneal dialysis. Peritonitis episodes are usually managed on an outpatient basis with intra-peritoneal antibiotics. Objective: to see if antibiotics retain their efficacy up to 5 days later, when instilled into peritoneal dialysis (PD) fluid and the impact it would have on peritonitis treatment protocols. Methods: Antibiotics used for the treatment of PD peritonitis were instilled at concentrations recommended by the guidelines of the International society of peritoneal dialysis (ISPD) into PD fluid of varying strengths - 1.36%, 2.27%, 3.86% and icodextrin. Agar plates were inoculated with microorganisms susceptible to the individual antibiotics. Equal concentrations of the antibiotic laden PD fluids were placed on the agar plates at 48 and 120 hours. Antibiotic free PD fluids were used as controls. The diameter of the zone of clearing on each agar plate was measured after overnight incubation using callipers and a calibrated grid. Results: There was no significant difference in the diameter of the zones of clearing at days 2 and 5 for each antibiotic and also no significant difference between different concentrations of dianeal and icodextrin. The control fluids failed to inhibit the growth of the bacteria. Conclusion: Bactericidal action of these antibiotics is maintained up to five days after instillation into PD fluid. This has enabled us to switch to a new treatment protocol, with beneficial effects on the social burden to patients and carers, without jeopardising the health of the patients.

RELATIONSHIP BETWEEN BIOELECTRICAL IMPEDANCE AND CLINICAL CLASSIFICATION OF HYDRATION STATUS IN PD

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Hyper-hydration in PD patients has negative effects on their prognosis. The Electric Bioimpedancia (BIA) is a safe and simple method to measure the body composition.
Aim: To compare the clinical assessment of hydration status by BIA and anthropometric classifications in PD patients.
Patients: 37 patients, 27 Males / 10 Females, mean of age 59.43 ±(15.26), with ERP: Causes for PD unknown 9, Gn 7, vascular 8, diabetes mellitus 13 and other 4; Time in PD 16.9 ±(20.20) months.
Methods: Coinciding with the 24h-balance, anthropometrics and BIA measurements were carried out; using the graphic distribution from vectors (Piccoli), patients were classified in Dehydration (D1, D2) normality (N) and hyper-hydration (H1, H2) HID BIA. Independently, patients were clinically classified as: Normal or De-hydration and hyper-hydrated (H1, H2, H3).
Statistical methods: ANOVA, lineal correlation and coefficient Kappa.
Results: The clinical status hydration HID had relationship with the estimations by BIA: direct with the percentages of extra-cellular water and the fatty mass; and inverse with the intracellular water and the free fatty mass. The correlation was weak but significant. The HID had relationship with anthropometric estimations: direct with IMC, Pleat tricipital and percentage body fat, and inverse with the density used in the formula of Siri for the estimation of fatty/water. The HID BIA has shown direct proportion with IMC and circumference the arm, and inverse with the concentration of serum albumin.
Conclusions: 1) The hydration's parameters estimated by BIA have a good correlation with the clinic. 2) The estimations of hydration by anthropometric methods have less correlation with the clinic.

HOW EFFECTIVE IS THE EDUCATION FOR PREVENTION OF INFECTION IN PERITONEAL DIALYSIS CATHETER EXIT-SITES?

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Catheter exit-site infection is a recognised complication of Peritoneal Dialysis (PD) and a significant cause of treatment failure (Gokal et al 1998). Findings from the clinical audit demonstrated that during the past five years exit-site infection rates have been increasing from 1 episode every 59 patient months to 1 episode every 48 patient months. It was felt that this rise could be due to some of the following factors: inadequate reinforcement of exit-site care post PD training; insufficient staff knowledge and teaching skills; inappropriate client selection for PD. A study was carried out to identify factors that were influencing client's understanding of catheter exit-site care.
 A self report questionnaire was sent to PD clients who had completed training in the last 2-12 months n=37. Response rate was 81%. Questions focused on client knowledge of exit-site care as taught during PD training. The overall findings of the study demonstrated that exit-site care education could be improved in the areas of crust/scab formation, swimming, exit-site technique and reasons for securing the catheter.
 Recommendations for practice include the need for constant updates of exit-site care education; the need to review the teaching methods used and ensuring staff knowledge is current. A more rigorous selection criteria for entry onto the PD programme may reduce complications such as exit-site infection but with current difficulties in providing haemodialysis, this is unlikely to occur. Nurses need to focus on supporting clients and reducing complications thus making PD a viable treatment option for as long as possible.

SAFE SWIMMING, A FACTOR FOR BETTER QUALITY OF LIFE IN PERITONEAL DIALYSIS PATIENTS

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Sea swimming, a recreation and exercise combination are important factors for patients' well being. Continuous Ambulatory Peritoneal Dialysis (CAPD) patients frequently ask about the risks in participating in this, important for Greeks, summer activity. Exit site (ES) protection measures are not usually taken and non-sterile colostomy bag (CB) used for this purpose has only been reported once before.
 We started a protocol in order to evaluate CB ES protection in 10 patients (one diabetic), 9 of them treated for at least 6 months by CAPD and 1 by Automated Peritoneal Dialysis, 7M and 3F, aged 52,5 years (35-69) and of various educational levels.
A. Before vacations: 1.Training in the use of CB with adhesive stick (complete water-proof occlusion of the ES). 2.ES score on the Twardowski scale. 3.Scrub culture from the ES.B. During vacations (7 weeks): 1.ES care after swimming. 2.No sunbathing.
C. After vacation and for a semester: 1.ES score on the Twardowski scale monthly. 2.Scrub culture from the ES monthly.
 Peritonitis episodes were recorded in A, B and C periods.
 CB was easy to use by our patients, No ES, tunnel infection episodes or peritonitis were noted during the study. This protocol applied for two consecutive years, and gave the patients a sense of security and made their vacations better than ever.
 CB catheter exit site protection, before swimming is a safe and practical method, with excellent results in our experience, despite the small number of patients included in our study group.

ARE WE UNDERESTIMATING ULTRAFILTRATION FAILURE IN OUR PERITONEAL DIALYSIS (PD) PATIENTS?

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One of the major functions of renal replacement therapy is effective fluid balance management. Effective fluid balance management is crucial for patients on renal replacement therapy. Many PD patients are fluid overloaded. The ADEMEX study found the major cause of death was congestive heart failure.
 The aims of this study were to identify if the current method used to estimate UF is accurate and to determine whether these errors significantly underestimate UF failure in our PD population. The standard peritoneal permeability analysis (SPA) uses a 3.86% glucose dwell over 4 hours and defines UF failure as <400ml. To calculate UF, it is common practice to weigh the "drain bag" and subtract the "fill" volume. However, this does not take into consideration the additional fluid for the "flush before fill" volume, the weight of the bag and the weight of the lines.
 A total of 21 bags were weighed, labelled 2L, mean content found was 2.23l. We then randomly analysed 12 patients at the time of their peritoneal equilibration test. The same investigator weighed every bag prior to infusion and patients performed their normal flush. The bag was re-weighed. Mean flush and infused volumes were calculated to be 100ml (range 50-200ml) and 2130ml respectively.
 Thus, using the SPA test, we predict there will be significant numbers of false negatives, the patient's ultra filtration volume being potentially overestimated. The current method of measuring UF does not include the flush or the weight of the bag, with the error in UF estimation approximately 300ml /bag.

HAEMODIALYSING AT HOME: THE CLIENT EXPERIENCE OF SELF TREATMENT

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This paper outlines the experience of people living on haemodialysis at home, a modality of renal replacement therapy that is becoming popular again. It reports a study, employing a critical interpretative methodology, of a small group of renal clients who haemodialyse themselves in their own homes. The study context is briefly established. Then, from an analysis of the set of client accounts through reference to relevant renal literature, the key features of the experience of self-treatment at home with haemodialysis from the participants' perspective are described. All participants confidently managed their own treatment at home, preferring their quality of life on this modality of renal replacement therapy to in-centre dialysis, which they had all experienced. They considered that self-treatment at home facilitated the necessary negotiation of the requirements of therapy into their usual lifestyle. All had sometimes varied the therapeutic prescription in order to enable them to continue their usual lifestyle despite the requirements of therapy. For participants the uncertainty about their future on dialysis, typical of all renal clients, was specifically focussed on the potential loss of their independence in managing their own treatment. Despite self-treatment the participants revealed the altered interrelationship between autonomy and dependence, characteristic of people using any modality of renal replacement therapy, in several aspects of their lives.

Although more demanding for them than in-centre treatment, this study, outlining the renal client perspective, indicates that self-treatment at home can enable a superior quality of life for many people living on haemodialysis.

DEVELOPMENT OF GUIDELINES FOR RENAL NURSES TO PROMOTE ADEQUATE SELF-MANAGEMENT OF RESTRICTED FLUIDS FOR DIALYSIS PATIENTS

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Most dialysis-patients have to keep to a strict fluid restriction. A large number of patients fail to adhere to this restriction, which can be life threatening. Often this is not the result of a self-management decision but of inadequate coping. The aim of this study is to develop a guideline for renal nurses to support haemodialysis patients at risk for inadequate self-management regarding fluid restriction. The basic assumption of the guideline is to focus care on the 'lived experience' of being a person with terminal renal failure (hereafter: lived experience care).

The guideline is based on prior research and data from two focus group interviews with renal patients and caregivers. The 'lived experience care' is described in five phases during which the renal nurse and the patient in dialogue agree on what the renal nurse can do for the patient to allow him to realise his own goals pertaining to fluid restriction in order to reconcile the demands of the disease with the demands of life as well as possible.

The guideline is pilot tested by seven renal nurses at four dialysis centres. Evaluation will be based on interviews with renal nurses, patients and other professional caregivers. After the evaluation adjustments to the guideline will be made. Results of the evaluation and adjustments to the guideline will be presented.

In developing the guideline it appeared that the 'lived experience care' leads to new perspectives that allow for integration with scientific insights.

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SUPPORT GROUP FOR PATIENTS DURING DIALYSIS

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The holistic approach relates to the person as a whole, covering all aspects of care, including the way in which the patient perceives his illness in relation to his methods of coping with the difficulties that stem from his illness and treatment and the patient's ability to utilize available resources from his environment. The above may have a direct or indirect influence on his treatment's success. Based on this assumption, a support group was set up for patients, during dialysis. Four patients met once a week under the guidance of a nephrology nurse also trained in group leadership through art. Among subjects covered were:

- Methods of coping with illness and pain
- Relationship between the patients and staff.
- Dependence versus responsibility and regaining control.
- Relations with one's partner and family.
- Search for meaning and flavour of life.
- Finding hope and coping with despair.

In time the ties between the patients strengthened and each meeting became a source of support, encouragement, learning and socializing. According to the patients, they began to feel like a family. During the meetings they claim to have forgotten their pain, the dialysis session passed very quickly, and they were given an opportunity to discuss things with people who understood them and had similar experiences. The existence of a support group during dialysis is a new experience in our unit and there are many difficulties involved. However, its obvious benefits strengthen the will to continue and to start again with a new group.

SEXUALITY AND CHRONIC DISEASES: WHAT PREVENTS US FROM SPEAKING ABOUT IT?

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Introduction: The dialysis patient experiences significant changes in various aspects, including sexuality. Although this area is inseparable from nursing care, staff experience difficulties in dealing with this subject. Literature states there are some reasons for this: (1) lack of knowledge and awareness of subject importance; (2) personal perceptions, education, and cultural background.

Objectives: (1) examine staff's feelings about patient education regarding sexuality; (2) identify factors which inhibit instruction; (3) identify staff's educational needs; (3) raise awareness for the importance of sexuality education; (4) provide staff with appropriate training and tools.

Process: (1) literature review; (2) interview 28 staff members using questionnaire; (3) analysis and presentation of data; (4) workshops for small groups according to identified needs, instructed by an expert.

Results: (1) 86% of staff believe that instruction by a nurse will greatly help patients; (2) 86% feel there is insufficient reference to the subject; (3) 68% feel uncomfortable in terms of invading patient's personal life; (4) 73% think cultural background, and beliefs influence their willingness to instruct; (5) 89% have not been trained; (6) 90% are interested in training workshops.

Conclusions: (1) perception of staff and lack of knowledge reduces willingness and ability to instruct; (2) structured program is an efficient tool for raising awareness of subject and providing teaching skills.

Recommendations: nursing staff have an important role in patient education regarding sexuality. Action is needed in order to raise staff's awareness of subject for dialysis patients. Staff's needs, values, and feelings and influence on treatment should be examined.

DEVELOPING A NURSE LED ERECTILE DYSFUNCTION CLINIC FOR RENAL PATIENTS

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Erectile Dysfunction (ED) can be defined as the inability to achieve and/or maintain an erection sufficient for satisfactory sexual activity. (Feldman H A et al, 1994) ED is a common finding in men with renal failure.

In one study of 32 dialysis patients, 45% with Chronic Renal Failure experienced ED. A further 35% experienced ED after commencing dialysis. (Abram H S et al, 1975).

The Nurse Education in Erectile Dysfunction study day highlighted the need for our unit to introduce this service, and an erectile dysfunction nurse post was created.

The post was established initially for one year funded by Pfizer Ltd, with clinics running one day per week. All clinics are nurse led, however medical backup is available, a link was also established with other nurse practitioners in this field.

An appropriate assessment tool has been devised to assist in determining the type of ED the client presents with. Protocols and advice sheets have also been drawn up.

113 men attending as out patients, 76 haemodialysis, 19 peritoneal dialysis and 18 attending low clearance clinic have been initially targeted using a Sexual Health Inventory for Men Questionnaire (Rosen R C et al, 1997). 33% of the questionnaires were returned and those men were invited to attend the clinic.

Initially starting on Sildenafil 25 milligrams, progress was monitored and the dosage altered up to the maximum of 100 milligrams.

Following the good response the service is now being extended to male patients with diabetic renal disease and those who attend the general nephrology clinics.

EXERCISING DURING HAEMODIALYSIS - THE PATIENT'S AND THE STAFF'S EXPERIENCES

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Exercising during haemodialysis is a new field of care and rehabilitation in ESRD patients. In our centre over the last three years both a bicycle ergo meter training and /or a gymnastics and strength exercises training program are offered two to three times weekly. Permanently 30%-50% of the patients take part in the program, depending on intermittent disabilities, hospitalisation, or vacation. The age ranges between 35-87 years (median 63 years) (55% female and 45% male).

The aim of this project is to analyse the experiences with the program and the assessment of the role for the staff. Therefore both the patients and the staff were questioned anonymously using two self developed forms.

Results: (Answers %) 1. Patients: improvement in

- 50-60% general endurance
- 85-90% flexibility and co-ordination
- 85% strength/strength endurance
- 50% climbing stairs
- 35% household activities
- 54% leisure time activities
- 69% time on HD is more changing

2. Staff:

- 100% agreement with the program
- 30-50% depending on the patients' condition
- 100% promotion in information and motivation of the patients
- 43-57% according to the condition of the patients'
- 10-50% of the staff would co-supervise the program, especially gymnastics.

Discussion and conclusion: Exercising during haemodialysis seems to give a great improvement in patients well-being, in physical capacity and for daily-living-activities. It is highly judged by the participating patients, and it is also high merited by the staff. - This experience in our centre can be an example for extended practice and the changing role of care, not only for saving life but to improve quality of life.

PATIENT AND STAFF PERCEPTIONS OF HOW TERRORIST ATTACKS AFFECT THE DIALYSIS UNIT

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The past two years has seen numerous terrorist attacks, which have taken their toll on the entire population including the delicate relationship between Arabs and Jews.

Caring for terror victims presents a professional challenge especially for the nursing staff. In the wake of a terrorist attack, the media is flooded with reoccurring accounts of the atrocity including horrifying pictures from the scene of the attack and interviews with eye witnesses and victims. These accounts are broadcast continuously and reach every radio and television. The purpose of this study is to examine how terrorist attacks affect the feelings of patients and staff in the haemodialysis unit, where special relationships often develop as a result of frequent contact.

This study uses qualitative methods to examine the perceived experience of the participants. Interviews were conducted with 20 caregivers and patients, from both the Jewish and Arab populations that either work or receive treatment in the nephrology department. The interviewer examined how patients and staff experience the terrorist attacks while they are in the dialysis unit and how they feel these events affect treatment in the unit. Responses from these interviews were analysed and categorized.

Initial results suggest that there is a need to consider the effect of the incident on patients and staff in the event of further attacks. Further results will be presented at the conference and serve as a basis for recommendations that may be used by caregivers dealing with similar stressful situations.

5 YEAR SCIENTIFIC RESEARCH PROJECT ON PSYCHOSOCIAL ACCOMPANYING IN GERMANY

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Aim: Find out in a five year project if and if yes why Psychosocial Accompanying (PA) of kidney patients and their relatives is a necessary offer.

Method: Find out about the situation in Germany. A questionnaire to 749 units (structure, quantitative/qualitative indicators - units with PA, why no PA - units without PA). 110 (= 15%) answered. 83 units offering PA paid this service from own revenue. 77% of the units is pro PA; however organisational, structural and mainly financial obstacles oppose the implementation of PA.

A central coordination office has been established to support and coordinate the four model projects with four social experts installed in dialysis and transplant units in four cities. The main task of the fully integrated social experts were: Talks with patients. Networking and promoting PA. Evaluation of the results in all model projects from the perspective of the patients, the nurses and the social workers. First patient questionnaire was at the very beginning of the model project (situation and needs of kidney patients). PA on demand/ when necessary (crisis situation, stopping dialysis treatment). PA as a voluntary offer. Regular presence of the social worker. Respect of patient's fears. Second patient questionnaire (patient's experience with PA) six months after the beginning of the model projects. Questionnaire to doctors and nurses on own experiences with PA. Conclusion: PA is a must within the medical treatment of kidney patients (mainly predialysis, elderly); 1 social worker per 200-300 patients. The implementation of PA in all units is the next step.

SUPPORTIVE GROUP PSYCHOTHERAPY IN ESRD PATIENTS ON CAPD

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Group Psychotherapy has been applied successfully in several chronic diseases (malignancies, Diabetes Mellitus, lung diseases). A review of the literature failed to reveal references regarding Supportive Group Psychotherapy in ESRD patients on maintenance therapy, although several authors have stressed the influence of the emotional condition of these patients on the progress of therapy. This study deals with a model supportive group of patients on CAPD, based on private interviews and according to the B.D I. (Biphasic Disorder Index) and SCL-90 (symptom check list) scales. We describe the structure and the function of this group, its relationship with the health system, as well as some interesting group phenomena. Finally, we present the main conclusions during the first year of existence of the group. These conclusions show that the emotional condition of the patients has been improved, and that the patients have a more active role in their therapy, as well as an extra motive for cure.

THE BEST CARE THROUGH NEW DEVELOPMENTS? AN APPRAISAL OF THE PROVISION OF CULTURALLY SENSITIVE HEALTHCARE AND INFORMATION THROUGH GOVERNMENT INITIATIVES

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People of South Asian origin constitute a significant proportion of our country's renal patient population. Hence there is a requirement to address their needs in a culturally sensitive manner. Wide-ranging ethnic inequalities in healthcare are well known. (e.g. Acheson 1998).

The aim of the paper is to examine the ethical, legal and policy aspects as a rationale to provide culturally sensitive health care; and evaluating the impact that recent Government initiatives have had on health care for South Asian renal patients.

A Government document of 2001 recognized that if users are involved in planning and development, services will be appropriate, and suited to the needs of the patients. Our renal unit has had a long history of such participation. We provide language specific education and care in certain areas, for which we have received positive feedback and good results. The overarching principles, quality and equity underpin the Government's National Service Framework. These are features of healthcare ethical thinking and tenets of the Human Rights Act 1998. It is encouraging to note that major efforts have been made to ascertain patients' views' through culturally sensitive canvassing methods, which are likely to affect future developments in renal care at a national level. A Government Audit Body has recently commended our renal unit for the general culture sensitive approach. It is recommended that best care needs to be instituted from Governmental and higher managerial level, along mandatory guidelines, and not at the level of the individual nurse, in order to effect change.

Quality, Audit and Research

THE INTRODUCTION OF AN ONGOING SKILL ASSESSMENT TOOL TO THE NORTH WEST DIALYSIS SERVICE

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The NWDS has 90 staff working in seven centres. Although staff have always held general health qualifications (e.g. nursing) initial dialysis skills are acquired from training by peers; some having formal postgraduate renal qualifications. This paper outlines the development and implementation of an ongoing formal program to ensure that all staff possess and retain the requisite skills to perform haemodialysis.

In 1999, in an effort to ensure continuous high skill levels of staff in daily practices and theoretical knowledge which is consistent across the North West Dialysis Service (NWDS), Skill Assessment Tool (SAT) were introduced for all staff. The SAT is taken in two parts over three years:

Part 1: Comprehensive assessment of basic dialysis procedures; an intensive 2 day practical and theoretical module - completed upon commencement with NWDS in Year 1.

Part 2: Varied self-assessment modules, set and completed in both Years 2 and 3. Initial barriers to the introduction of the SAT, subsequent staff responses, the successful implementation and ongoing impact on NWDS will be discussed. For instance, it is now a requirement that all staff achieve the SAT as an integral component of their annual performance appraisal. A key performance indicator for each centre is a target of 100% of staff achieving SAT - over the last three years this target has been achieved.

In conclusion, successful implementation of SAT at NWDS has both enhanced and ensured that all staff performing haemodialysis have demonstrable high level of technical skills which are consistent across the NWDS and possess advanced theoretical knowledge on an ongoing basis.

THE RENAL NURSE IN A NEPHROLOGY WARD SETTING

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The purpose of this study was to explore nurses' experiences of caring for patients with chronic renal impairment in a nephrology ward setting. Utilising a Heideggerian phenomenological approach the site for the study was a renal ward in a General Teaching Hospital. Through purposeful sampling nine nurses agreed to participate in the study. Unstructured interviews were employed in the collection of data and a reflective process guided data analysis. One of the themes which emerged from this process was 'The Renal Nurse'.

The theme 'The Renal Nurse' incorporates the following sub-themes: the role of the renal nurse; staying in renal nursing and the renal nurse caring for the dying patient with chronic renal impairment. The renal nurse was identified as having numerous roles. These included patient educator, patient advocate, support person, member of the multi-disciplinary team and being technologically aware. Staying in renal nursing was associated with the uniqueness of the nurse-patient relationship and the demanding type of nursing encountered in the nephrology ward setting. The renal nurse caring for the dying patient with chronic renal impairment described this experience as difficult and upsetting, yet, these nurses considered it a privilege to care for patients at the end of their life span.

The implications for nursing practice that emerged from this study include the need for formalised structures for patient education and mechanism's for recording delivery of this education. Furthermore, a structured programme of staff development incorporating areas such as counselling and patient education would also be beneficial.

DEVELOPMENT OF A SAFE AND EFFECTIVE PROTOCOL FOR THE ADMINISTRATION OF BOLUS DOSE INTRAVENOUS IRON

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Due to several adverse events occurring with early parenteral iron treatment, its use was limited and iron deficiency was a major obstacle to optimal anaemia management in the pre-dialysis, peritoneal dialysis and transplant populations of the unit. With the provision of a nurse specialising in renal anaemia it became possible to track and identify causes for these adverse events and changes were made to improve safety. Having done so the drive was to provide a more effective parenteral iron regimen. A study was designed to compare safety and efficacy of ad hoc intravenous infusions of iron with sliding scale courses of bolus dose intravenous injections tailored to individual requirements according to haemoglobin and ferritin results. Results from sliding scale courses of iron showed mean haemoglobin rise twice that achieved with ad hoc infusion with no adverse events providing patient weight was taken into account. Substantial cost savings were identified in reduced erythropoietin use and despite a reduction in time spent on the unit by the patient, nursing time with the patient increased with bolus dose injection providing valuable nurse - patient interaction time. A general reduction in the use of oral iron in the unit was identified raising the question, 'Should oral iron be reintroduced, providing it is well tolerated by the patient, at earlier stages of renal impairment to reduce development of iron deficiency? Further studies are required to investigate this plus those to identify optimal dosing of parenteral iron to maintain iron stores.

IMPROVING HAEMODIALYSIS CARE THROUGH IMPROVED REORGANIZATION OF THE DIALYSIS

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Israel is a melting pot of dozens of cultures. In our haemodialysis unit it was very important with these different cultures to reduce the situations that might cause tension, such as long delays in starting dialysis. This is particularly true in our unit where in one year the number of patients increased by one third from 101 to 151, causing long waiting periods to begin dialysis. We carried out 2 plans to improve the situation.

- a) A team of nurses decided on new guidelines of treatment. Among the decisions made were to reduce waiting time for dialysis by adhering to strict times of starting and stopping dialysis.
 - b) We held 2 workshops, run by a social worker, which dealt with pressure at work, coping with change and improving communication among the staff and between the nurses and the patients. After a run-in period of 7 months during which time the changes were introduced we interviewed the nursing staff and the haemodialysis patients. Results: During this period there was a marked reducing in waiting time to get on dialysis, from a mean of 135 minutes to 28 minutes. 85% of the nursing staff were pleased with the change, 10% felt there was no difference and 5% said things were worse. Among the patients 70% were pleased with the change, 20% felt there was no difference and 5% said things worse.
- Conclusion: It is possible by changing elements in the organization of a dialysis unit to improve patient and staff satisfaction.

A RENAL ASSESSMENT CENTRE - CONCEPT & 1ST YEAR DATA

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This hospital has 730 dialysis patients, 700 renal transplant follow-ups, 20,000 outpatient consultations/yr and 60 in-patients beds. Until Nov 2001, there was no clear admission/assessment pathway for renal patients with acute problems requiring immediate review. The patient journey was fragmented and waiting times for medical assessment, investigations and treatment were long. Referral pathways were complex and uncoordinated with unnecessary admissions. We therefore commissioned a process analysis and developed a Renal Assessment Centre (RAC) to provide a single centre for all renal patients, requiring urgent medical assessment and/or admission, flexible outpatient and post discharge review. The RAC was opened as a nurse-led, four stationed area with dedicated protocols/pathways, admission and assessment criteria and a team of renal nurses trained in cannulation, phlebotomy, ECG acquiring, patient triage and history taking. During the first 12 months 2,500 patients were assessed during the opening hours of 0900-2100. Data was collected with regards to referral source (573 Self, 488 PD, 439 from medics, 195 from haemodialysis units), treatment modality (61% PD at month 1 Vs. 40 % PD at month 12; 1% pre dialysis at month 1 Vs. 19% at month 12), booked vs. emergencies (77% emergency), correct vs. incorrect referral (78% correct), waiting times (27 minutes from arrival to completion of nurse assessment) admission rates (24%). Patient satisfaction indices were high and there were no adverse clinical incidents. Thus a designated, central point for assessment of renal patients leads to rapid review, a controlled admission process and safe and satisfactory clinical outcomes.

GEOGRAPHIC VARIATIONS IN ANAEMIA MANAGEMENT IN EUROPEAN DIALYSIS PATIENTS: BASELINE DATA FROM A LARGE EUROPEAN STUDIES PROGRAMME

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A recent series of European studies involving a large number of dialysis patients provided an opportunity to assess geographical variability in the proportion of patients meeting target haemoglobin (Hb) concentrations as recommended by the EBPG. Twelve European countries participated in 8 multicentre studies involving 4792 subjects. At baseline, patients were required to have stable Hb concentrations between 10-13g/dL and adequate iron parameters (serum ferritin levels $\geq 100\mu\text{g/L}$ or TSATs $\geq 20\%$). Proportions of patients with Hb concentrations $\geq 11\text{g/dL}$ and 95% exact CIs were calculated for each of the 8 studies and the proportion across countries was compared using a Chi square test. There was significant variation across countries. The proportions of patients at baseline reaching Hb concentrations $\geq 11\text{g/dL}$ on recombinant human erythropoietin (rHuEPO) ranged from 66% to 84% (see table). Even in this selected population that had concentrations of Hb ranging from 10 to 13g/dL, the EBPG defined standards (85% of patients should have Hb ≥ 11) were not met in any of the countries or groups of countries studied. In addition, there was significant variation ($p < 0.001$) in the proportion of patients achieving the target Hb concentration across these European populations. These data show that there is room for significant improvement in the treatment of anaemia in the European dialysis population.

Proportions of Dialysis Patients Meeting Target Hb Concentration on rHuEPO at Baseline

Countries	Number of Patients	% Patients with Target Baseline Hb > 11 g/dL (95% CI)
Austria	250	79 (73, 84)
France	1008	66 (63, 69)
Germany	1502	70 (68, 72)
The Netherlands	222	76 (70, 81)
Portugal	300	79 (74, 86)
Scandinavia*	422	84 (81, 88)
Spain	826	79 (76, 82)
UK/Ireland	262	78 (72, 83)

*Denmark, Finland, Norway and Sweden.

CARDIAC OUTPUT MEASUREMENTS WITH THE TRANSONIC HDO₂ MONITOR; A VALIDATION STUDY

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The Transonic HDO₂ monitor (TM), based on the indicator dilution principle, measures both access flow and cardiac output (CO). Aim of this study: A) compare CO TM with the standard Echo-Doppler method; and B) compare CO and access flow in TM. In a random sample of our population, studies were done in the first hour, within 5 minutes. TM principle: a flow QC set and ultrasound sensors were placed on the bloodlines, access flow and re-circulation were measured. 30ml saline was injected in 3 to 6 seconds into the side port of the venous Flow QC tubing segment, returned and was detected in the arterial segment, CO was calculated by a computer. All results were averaged from 2 to 3 measurements.

- A) We performed 20 sets of measurements (n=12), age 65 years (33-78), 9 in forearm and 4 in upper arm fistula, 7 in graft. CO was 5.9 (3.7-9.8) L/min with TM and 5.8 (3.2-9.1) L/min with echo-Doppler. The mean difference between the two methods was 0.18±0.84L/min, r=9 (p<0.01).
- B) We performed 35 measurements (n=23), age 65 years (33-78), 19 in forearm and 7 in upper arm fistula, and 9 in graft. CO was 5.1 (3.2-9.4) L/min, access flow was 820 (320-2050) ml/min which was 16±6% of the CO, r=0.57. CO measurements with TM match reasonably well with those with echo-Doppler. CO measurement could be integrated in the nursing vascular access surveillance program. The method thus offers a simple and reliable method to monitor CO and derived variables during haemodialysis.

IRON STATUS AND ACHIEVEMENT OF HAEMOGLOBIN TARGETS IN EUROPEAN DIALYSIS PATIENTS

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The objective of this analysis was to describe iron status parameters according to haemoglobin (Hb) levels (<11 or ≥11 g/dL) within a large population of European dialysis patients. 4792 dialysis patients were switched from recombinant human erythropoietin (rHuEPO) to darbepoetin alfa treatment, administered for up to 24 weeks, in 8 multicentre studies in 12 European countries. Patients had Hb concentrations of 10-13g/dL and adequate iron parameters, measured at baseline and end of study (serum ferritin levels of ≥100µg/L or TSATs ≥20%). Mean (SD) serum ferritin and TSAT were calculated for patients with Hb >11g/dL and with Hb <11g/dL. At baseline, 4098 (85.5%) patients were evaluated for serum ferritin and 1563 (32.6%) were evaluated for TSAT. In patients with Hb ≥11g/dL, mean serum ferritin levels were 452 (+/-325) µg/L and mean TSAT was 32.0% (+/-12%). In patients with Hb <11g/dL, mean serum ferritin levels were 450 (+/-306) µg/L and mean TSAT was 31.2% (+/-13%). Mean ferritin levels ranged from 344µg/L (Austria) to 524µg/L (Germany). Mean TSAT ranged from 24% (Netherlands) to 34.7% (Portugal). 1142 patients had baseline and follow-up measures. Among them mean serum ferritin was 428.5µg/L at baseline and 449.5µg/L at end of study. In 363 patients with baseline and follow-up measures, mean TSAT was 31.2% at baseline and 31.7% at end of study. These data show that mean iron parameters at baseline were adequate, suggesting that other factors should be addressed to improve the quality of care in anaemia management.

THE EPIDEMIOLOGY OF ACUTE RENAL FAILURE REQUIRING RENAL REPLACEMENT THERAPY

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We have conducted the first comprehensive, prospective national study of the incidence of Acute Renal Failure (ARF) receiving renal replacement therapy (RRT) in a defined patient population. The study is based in a Western European country with a population of just over five million. We registered adult patients treated for ARF, Acute on Chronic Renal Failure (ACRF) and Chronic Renal Failure (CRF) receiving their first RRT over a nine month period. The aims of the study are to:

1. Identify factors causing ARF requiring RRT.
2. Determine the incidence of ARF according to age, sex, socio-economic group and co-morbidity.
3. Study factors influencing the outcome of admission to hospital, patient and renal survival.
4. Establish where in hospital such treatment is undertaken and what is the length of admission.
5. Ascertain what proportion of these patients have pre-existing renal impairment (i.e. ACRF).

A standard data collection form was completed for each patient registered on the study. The patients were identified by regular contact with hospitals offering RRT as treatment for ARF. Over a recruitment period of 36 weeks, 878 patients fulfilling the study criteria for ARF and ACRF were identified (mean age 62.1 years, 61% male).

Conclusion:
We found an incidence of 223 p.m.p/year for ARF and ACRF receiving RRT; a third of these occur in patients with a degree of pre-existing renal impairment (ACRF). 54% of all patients received their first RRT in the intensive care unit and mortality in ARF for all patients by 90 days was 47%.

DARBEPOETIN ALFA MAINTAINS TARGET HAEMOGLOBIN REGARDLESS OF ROUTE OF ADMINISTRATION

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The need for higher doses of recombinant human erythropoietin (rHuEPO) with intravenous (IV) administration has led to widespread use of the subcutaneous (SC) route in dialysis patients, despite its inconvenience. We compared dosing of rHuEPO to darbepoetin alfa across routes of administration. 4570 dialysis patients in 11 European countries (7 multicentre studies) were switched from rHuEPO to darbepoetin alfa at reduced frequency of administration: 2 or 3 times weekly rHuEPO to once weekly darbepoetin alfa; once weekly rHuEPO to once every-other-week darbepoetin alfa using the same route of administration used at baseline. Darbepoetin alfa was titrated to maintain Hb concentrations within a target range of 10-13g/dL for up to 24 weeks. The mean change in Hb concentration from baseline to end of study was 0.24g/dL (95% CI: 0.17-0.30) for IV-treated patients and -0.07g/dL (95% CI: -0.12--0.02) for SC-treated patients. In IV-treated patients there was a decrease in mean weekly darbepoetin alfa doses from 27.6µg (95% CI: 26.8-28.5) at baseline to 23.7µg (95% CI: 22.9-24.5) at end of study. Mean percentage decrease was 15.4% [95% CI: 13.1-17.6]. Mean weekly SC dose was stable throughout the study (25.7µg [95% CI: 25.1-26.3] at baseline vs. 25.0µg [95% CI: 24.3-25.6] at end of study). Mean IV dose was significantly higher than mean SC dose at baseline (p<0.001) and significantly lower at end of study (p=0.017). Our analysis shows that darbepoetin alfa maintains stable Hb concentrations regardless of route of administration.

TREATMENT OF HAEMODIALYSIS CATHETER-RELATED INFECTIONS

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Sepsis has been the main limiting factor in the use of tunnelled dialysis catheters in our unit, resulting in the loss of 56% of these lines during the year 2000.

To address this issue a protocol was formulated involving the use of antibiotics-heparin line locks in addition to IV antibiotics with a view to disinfecting and salvaging the dialysis catheters. Patients who had tunnelled lines and signs of sepsis had blood cultures taken from both lumens of the catheter and from a peripheral vein. They received a bolus of IV Vancomycin and Gentomycin. The dialysis lines were then locked with a solution containing 100µg-mls of Vancomycin, 20µg-mls of Gentomycin and 500iu-mls of heparin, until the patient returned for the next dialysis session 48-72hrs later.

Antibiotic line locks were replaced at the end of each dialysis session over a period of two weeks. Systemic antibiotics were adjusted according to blood culture results.

Over the past 6 months we have treated 32 episodes of suspected dialysis-related sepsis. In 6 of the patients, blood cultures were sterile and the patients remained well. Sepsis was therefore excluded and antibiotics were stopped. 26 patients had positive cultures confirming sepsis. Treatment was successful in 16 patients (62%) but failed to salvage 9 dialysis catheters (35%). The protocol has shown promise, as we have been able to salvage almost two thirds of the lines that previously would have had to be removed and replaced. The study is ongoing and we hope to confirm these initial observations.

COCKROFT-GAULT VERSUS MODIFICATION OF DIET IN RENAL DISEASE - INDIVIDUALISING PRE-DIALYSIS MANAGEMENT

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Historically the decision to initiate a patient on renal replacement therapy was based on symptoms and creatinine level. The stepped approach to pre-dialysis care has been adopted in our centre over the last three years, using the Cockcroft-Gault estimated Glomerular Filtration Rate (CG-GFR) dialysis is initiated when the GFR reaches 10ml/minute. This approach provided us with an effective tool to manage and streamline a large pre-dialysis population of over 350 patients. It became apparent that a small number of patients with a CG-GFR of between 20-30 mls/min were presenting at clinic with more symptoms of advanced end stage renal failure. It was noted that this group of patients had characteristics such as a high body mass index (BMI) or were of Asian and Afro-Caribbean ethnic origin. A review of practice and a literature search were undertaken. The decision was made to use the MDRD GFR that takes into consideration the patient's body weight, race and serum albumin. The data correlated so far suggests that in such individuals the CG-GFR overestimates GFR as compared with the MDRD GFR. To date the use of these tools have enabled us to adopt a holistic and evidence based approach to pre-dialysis management.

ADEQUACY OF ANAEMIA MANAGEMENT IN THE NETHERLANDS

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European Best Practice Guidelines advise start of epoetin (EPO) treatment in dialysis patients with haemoglobin (Hb) levels <11g/dL and propose a Hb target >11g/dL for 85% or more of the patient population. We determined whether Dutch anaemia management practices meet the guidelines and assessed the relationship of Hb and mortality and health-related quality of life (HRQL).

A cohort of 1359, participating in a large multicentre prospective follow-up study and starting dialysis between August 1996 and February 2002, were examined. Patients were followed until date of death or date of censoring in November 2002.

Mean Hb was 11.33g/dL. The prevalence of anaemia (Hb<11g/dL) was 43% (n=1136) of the patient population received EPO (median EPO does 6000 units/week). Among EPO users, 55% reached Hb target levels. 426 patients died during follow-up. Patients were subdivided into 10 groups with increasing Hb levels of 0.5g/dL per group (group 1: Hb<9g/dL 10: Hb≥13 g/dL). After adjustment, patients with Hb<9 g/dL showed the highest mortality risk compared to patients with Hb ≥13 g/dL (RR= 2.11, 95% CI 1.30 to 3.42) and the lowest HRQL as determined with the SF-36. Hazard ratios decreased and HRQL improved at increasing Hb concentration, but stabilized when Hb levels of more than 11g/dL were reached. These results indicate that the proposed Hb target of 11g/dL is a good predictor of mortality and is strongly associated with HRQL. The observation that only 55% of patients achieved this recommended target, either suggests that Dutch anaemia management practices need improvement or that the guidelines need reconsideration.

THE CONTRIBUTION OF RESIDUAL RENAL FUNCTION AND PERITONEAL CLEARANCE TO PATIENT SURVIVAL AND QUALITY OF LIFE

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The guidelines from the US National Kidney Foundation Dialysis Outcomes Quality Initiative on peritoneal dialysis (PD) assume equivalence between the peritoneal and the renal solute clearance. We examined in a prospective cohort study of dialysis patients the relative contribution of residual renal function and peritoneal clearance to patient survival and quality of life. We analysed the longitudinal data on residual renal function, clearance by dialysis, and quality of life of those patients who were treated with PD 3 months after the start of dialysis and participated in a prospective multicentre study in the Netherlands (n=413). The mean age was 52 year, the mean residual glomerular filtration rate (rGFR) at 3 months was 4.1 mL/min/1.73m² (SD:2.7). The mean peritoneal creatinine clearance (pCrCl) at 3 months was 4.1 mL/min/1.73 (SD:1.1). The 2-year survival was 84%. For each mL/min/1.73 increase in rGFR a 12% reduction in mortality was found (relative risk of death (RR)=0.88, P=0.039). In contrast, no significant effect of pCrCl on patient survival was established (RR=0.91, P=0.47). The differential impact of rGFR and pCrCl was confirmed in an analysis on a number of generic and disease-specific dimensions of quality of life. The beneficial effect of renal clearance and the absence of an effect of peritoneal clearance in the range of values common in current practice on patient outcome indicate that the two components of total solute clearance should not be regarded as equivalent. Higher peritoneal clearance targets do not necessarily improve patient outcome.

ASPECTS OF CARE IN AFRO-CARIBBEAN NEPHROLOGY NURSING

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The nephrology setting is multicultural, and all patients have multiple restrictions due to their illness. Because of the pervasive nature of this chronic illness, they will encounter multiple restrictions. One of the major challenges for health professionals in the twenty first century is to provide high quality care that meets the needs of a multi-ethnic society. The nephrology services particularly are caring for a large multi-ethnic group, and professional perspectives need to be re-conceptualised away from traditional and uni-cultural towards a multicultural view. This has been in some way aided by the European Dialysis & Transplant Nursing Association core curriculum for nephrology nursing which suggested including topics to cover cultural backgrounds and factors that affect health concepts of illness, however, the National Health Service remains based on the Western, British Culture and health care workers continue to display a lack of awareness of other cultures needs. One of the larger minority groups represented in ESRD are the Afro-Caribbeans and the numbers receiving maintenance haemodialysis is increasing (86% Caucasian, 8% Asian, 5% Black). In the case of the Afro-Caribbean renal failure patients some of the most important cultural factors relate to diet and skin care. If we are to deliver culturally congruent nephrology care and wish to achieve a multicultural perspective, we need to develop a deeper enquiring and adaptive approach into the differences in cultural habits.

LANTHANUM CARBONATE, A NOVEL, NON-ALUMINIUM, NON-CALCIUM PHOSPHATE BINDER, IS EFFECTIVE AND WELL TOLERATED IN HYPERPHOSPHATAEMIA

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Hyperphosphataemia in renal failure leads to significant morbidity and mortality. We assessed the efficacy, safety and tolerability of a new phosphate binder currently in development - lanthanum carbonate (LC) - in a randomised, multicentre, open-label, active comparator trial in three parts: Washout: 1-3 weeks. Titration: patients with hyperphosphataemia were randomised to receive LC (n = 533) or calcium carbonate (CC; n = 267) and titrated to dose within 5 weeks. Maintenance: phosphate-controlled patients received treatment for another 20 weeks. Throughout maintenance treatment, serum phosphorus levels were controlled in similar proportions of patients treated with LC and CC. Systemic absorption of LC was very low. LC was associated with a significantly greater decrease in calcium x phosphorus product than CC at Week 9 (P = 0.009) and a numerically greater decrease at Week 25. Adverse events, mostly of mild or moderate severity, occurred in 77.7% of the LC group and 79.8% of the CC group. Hypercalcaemia was more frequent with CC. In conclusion, LC is an effective, well-tolerated treatment for hyperphosphataemia, with a lower risk of hypercalcaemia than CC.

AUDIT OF DIETETIC INTERVENTION IN A DIABETIC RENAL CLINIC

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Background: The recently published Renal Association Standards (2002) state that all patients with End Stage Renal Failure should undergo regular screening for under-nutrition. The diabetic renal clinic is currently not funded for dietetic reviews. Renal dietitians noted patients commencing dialysis from the Diabetes Centre who had not been assessed by a dietitian. Aim: To audit a number of patients attending the diabetic renal clinic. Design: An audit form was designed to collect data from medical notes and the hospital biochemistry database. Data was collated regarding type and treatment of diabetes, glycaemic control, blood pressure, renal function and whether seen by a dietitian. Findings: 23 patients (16 male, 7 female), 8 Type I and 15 Type II. 22/23 patients had an HbA1c measurement with 12/22 not achieving the standard of < 7% (British and US recommendations 2000). Only 6/23 had a blood pressure of < 140/80 (British Hypertension Society 1999). 8/23 patients had a Glomerular Filtration Rate < 25mls/min but only 4 had seen a dietitian. 8/23 were Type I with 1 not having had a dietetic assessment. 15/23 were Type II with 8 not having had a dietetic assessment. 9/15 Type II patients were treated with insulin but 3 had never seen a dietitian nor had the 1 diet controlled patient. Conclusion: This audit has increased awareness of the need for dietetic review amongst the Diabetic specialists. Publication of the National Service Frameworks for both diabetes and renal could lead to more collaboration between the specialties and joint funded posts.

LANTHANUM CARBONATE DOES NOT AFFECT THE PHARMACOKINETICS OF DIGOXIN OR WARFARIN

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Patients with ESRD often require phosphate-binding agents to prevent hyperphosphataemia and allow fine-tuning of the synthesis and secretion of parathyroid hormone. We investigated the effect of a novel phosphate binder, lanthanum carbonate (LC), on the pharmacokinetics of orally administered digoxin and warfarin in two open-label, randomised, crossover studies each involving 14 healthy volunteers. In Study 1, participants were randomly assigned to receive either 0.5 mg digoxin alone or 0.5 mg digoxin taken 30 minutes after a fourth dose of 1000 mg lanthanum (1908 mg lanthanum carbonate). After completion of the first treatment period, participants were crossed over to receive the other treatment. There were 16 days between each of the digoxin dosing days. In Study 2, volunteers received warfarin 10 mg in a similar study design. The 90% confidence intervals for maximum plasma concentration (C_{max}), area under the plasma concentration-time curve ($AUC_{0-\infty}$) and time to maximum concentration (t_{max}) all fulfilled bio-equivalence criteria for both warfarin and digoxin, suggesting no pharmacokinetic interaction between the agents. Digoxin plasma half-life ($t_{1/2}$) was slightly longer when given with LC, although the difference was not considered clinically significant. Thus, co-administration of LC has little effect on the pharmacokinetics of digoxin or warfarin and can be safely prescribed with either agent.

IMPROVING INTERCULTURAL COMMUNICATION FOR PATIENTS WITH RENAL FAILURE

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According to the Central Bureau of Statistics, in 2010 the number of immigrants in Holland will increase to 10%. Likewise the population of dialysis units is changing. The multicultural diet-education group of the Dutch Renal Dietitians concluded from a questionnaire amongst all members that the predominant nationalities are Turkish, Moroccans and Surinam Hindustani. Due to different cultural backgrounds, other eating habits and language barriers, communication problems exists. Furthermore dietitians have little knowledge about different cultures.

Goal: improve quality of diet education for immigrants and promote the interest of dietitians in the differences in cultures and their consequences to life styles and education.

Methods: a book with photographs and drawings was developed. An interpreter explains the short Dutch text. For the patient photographs explain the relation between renal failure and food during predialysis, haemodialysis and peritoneal dialysis. Complaints such as fatigue and itching are depicted. Photographs give information about protein, phosphate-binders, sodium, potassium and liquids, considering Turkish, Moroccan and Hindustan eating habits and cultural backgrounds. For the dietitian the book gives tips and a record of attendance. Professional help was given by the Dutch Institution of Health and Illness Prevention. The project was funded by the Dutch Kidney Association.

Conclusion: we promoted under the Dutch Renal Dietitians the awareness of social and cultural implications involved in the provision of renal care. We try to achieve the same level of quality care for immigrant patients.

Future plans: evaluation of the usefulness of the photo-book.

Technology

LDL REMOVAL - AN UNUSUAL TREATMENT IN A SATELLITE HAEMODIALYSIS UNIT

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One in 1,000,000 individuals suffers with high cholesterol and lipid levels due to an inherited disease causing a defective uptake and catabolism of LDL. Untreated these individuals develop symptomatic coronary artery disease (CAD) and die often before 20 years of age.

One in 500 individuals suffer from ageing (CAD) with rising cholesterol and lipids, untreated these individuals life expectancy is reduced in comparison to those without such issues.

For those suffering from ageing CAD known as Heterozygote Familial Hyperlipidaemia with rising cholesterol and lipids, medication and dietary control may be sufficient. Unlike heterozygotes, in the Homozygote Familial Hyperlipidaemia individuals such treatment is inadequate in reducing cholesterol and lipid levels.

Historically the chosen method of treatment predominantly for homozygote familial hyperlipidaemic's was frequent plasma exchanges. This however carries many risks with the constant exposure to blood products. Today such LDL cholesterol can be removed through an adsorption column and extra corporeal circuit, specially designed to remove just the problematic cholesterol and lipids only by approximately 65-70% per treatment. Although this treatment is not a cure for homozygote familial hyperlipidaemia, as a result of a missing receptor to deal with lipids, it is a treatment, which provides an increased life expectancy for such individuals, by reducing the risks of CAD. Though costly this treatment is reasonably easy to prepare and is only about 2-2½ hours long once per week.

STUDIES IN DIALYSATE MIXING IN A SINGLE PASS BATCH SYSTEM

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The Genius[®] single pass batch system contains a closed tank with 75l of dialysate. We investigated whether mixing of the dialysate occurred during the dialysis session. Two different dialysate temperatures were compared: 37°C - 38.5°C. For that purpose, 10 chronic haemodialysis patients were dialysed twice with the Genius[®] system. All sessions lasted 270 minutes; the blood/dialysate flows were set at 300. Dialysate was sampled at 5, 60, 180, 210, 225, 230, 235, 240, 255, 270 minutes, both from the inlet and outlet dialysate line and tested for urea, creatinine, p-cresol, hippuric acid and indoxyl sulfate. Blood samples were taken pre dialysis, after 4h and post dialysis. A Kt/V of 1.17±0.20 and 1.18±0.26 was reached with the 37°C and 38.5°C dialysate temperature respectively (not significant). Serum levels of urea, creatinine, free p-cresol and total and free hippuric acid decreased significantly during the first 4 hours of dialysis. For all measured solutes, no differences in serum concentration were observed between the sessions with the two temperatures. It is demonstrated that recirculation of uremic solutes occurred at the dialysate inlet only near the end of the session when small quantities of fresh dialysate were left in the tank. Differences in dialysate temperature did not result in a different separation between used and unused dialysate, nor in differences in removal of toxins or Kt/V.

CONVECTIVE-CONTROLLED DOUBLE HIGH FLUX HAEMODIAFILTRATION: NOVEL BLOOD PURIFICATION MODALITY

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Conventional haemodialysis and high-flux haemodialysis remove small molecules weight toxins by diffusion process. Convective therapy such as HDF is more appropriate to remove larger molecules toxins, but it is costly and requires skilful personnel. The Convective-Controlled Double High Flux Haemodiafiltration (CCDHF) system was developed to reduce cost and difficulty of standard Haemodiafiltration (HDF).

CCDHF consists of two high-flux dialyzers connected with intermediary blood line and dialysate line. The dialysate connector is assembled with a restrictor (C-Clamp). The pressure is applied on restrictor, the dialysate pressure of the second dialyzer is increased resulting in backfiltration across the dialyzer membrane. The dialysate pressure of the first dialyzer, distal to the restrictor is decreased, resulting in net convection of plasma. The amount of backfiltration and convection in the system is controlled by balancing chamber of the haemodialysis machine, the rates as such are adjusted at restrictor guided by HD 01 haemodialysis monitor (Transonic System Inc, Ithaca, NY).

The convection rate derived from HD01 haemodialysis monitor was compared with the one derived from haematocrit alteration method. The correlation between the values of convection rates derived by two systems were excellent ($r=0.8, p<0.01$) while absolute prediction error (APE %) was low ($4.8\pm 3.3\%$).

In conclusion the CC-DHF circuit is simple to set up and can be operated with standard HD machine. The convection rate is easily accurately controlled. Thus this novel modality can be applied to daily practice.

DIALYSIS TECHNOLOGY EDUCATION - AN IMPERATIVE PROGRAM FOR SERVICE EXCELLENCE IN DIALYSIS CARE

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It has been long established that the role of biomedical technology is vital to the improvement of dialysis care. Understanding of machine function is critical to ensure patient safety and clinical effectiveness. A recent study in 2002 revealed that some of the functionalities and innovative features in modern medical devices are rarely used. It thus becomes mandatory for service providers to continuously impart dialysis technology know-how to clinical staff so that the best quality of service is achievable.

Dialysis technology education has become an integral part of curriculum for nurses, renal technicians and biomedical engineers. Realizing the potential that an in-depth understanding of this technology has on dialysis care services, our education Institute has successfully incorporated courses for all clinical staff.

The use of videos and integrated audio-visuals on design and development of medical technologies enables all participants to think laterally and provides a good insight on machine functions. Further, an online forum and practical laboratory-based sessions are integral to support this program. Periodic feedback and reviews provide a measure of the impact of learning on clinical service. Support from all manufacturers in the form of device donations and educational grants has been vital.

Our study across 21 centres has shown the importance of such learning initiatives and how it has enabled clinical staff to achieve service excellence in their respective job functions. The success of dialysis care services, beyond doubt, lies with the best use of modern technology and the continuous education programs implemented in parallel with service delivery.

AN EMPIRICAL EVALUATION OF RISK BASED MAINTENANCE PROTOCOLS AND INSPECTION PLANS IN A DIALYSIS PROGRAM

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Many modern medical devices require regular and effective maintenance for best functional performance. The consequences of ineffective maintenance can be huge in terms of operational costs, patient care and management time and have a direct impact on process efficiency. Risk based inspection and maintenance protocol provides a measurable response by reducing medical device downtime through optimizing inspection and testing strategies. An overall risk-based process involves many essential steps, which include hazard identification, evaluation of the potential consequences of hazards and their likelihood, thereby estimating a measure of risk. This value when compared to the organization's risk-acceptability criteria tells us if the risk needs to be mitigated. Because risk cannot be completely eliminated, the residual risk must be managed. The risk assessment approach to medical device maintenance undertaken at 22 dialysis centres and prevention clinics, incorporated a structured methodology wherein firstly, a comprehensive medical device inventory was established, potential failures for each device were determined, and likelihood of failures was ranked. This was followed by ranking the potential consequence of each incidence with considerations to patient safety, personnel safety and environmental damage. Risk acceptability was determined by plotting on a risk matrix. Finally, reduction in risk by inspections vis-à-vis conventional protocols was assessed.

The benefits of such an exercise, although not limited to, include reduction in device downtime, inspection time, with related costs, and quantification of real risk. Our analysis indicates that this exercise when extended to other key functional areas in a clinical setting can result in reducing operational costs.

AN EXPLORATION INTO PROVIDING A KIDNEY FOR TRANSPLANTATION AS A LIVING DONOR AND PERSONAL MEANING: IMPLICATIONS FOR COUNSELLING

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This study adds to previous, mostly quantitative, investigation into the experiences of living related kidney donors. Such investigation is important so that potential donors are supported effectively and donation programmes remain relevant and specific to need. Exploration takes place into donor decision making processes, the effect of donation on self-concept and the most effective form of professional support. A non-probability sampling technique highlighted eight living related kidney donors who were interviewed using a semi-structured interview format. Raw data was analysed through the qualitative technique of Interpretative Phenomenological Analysis. The decision to donate is made rapidly, decisively and rationally. Self-concept is not changed through the decision to donate. Professional support provides reassurance to donors, particularly when experiencing acute psychological reaction. The need to provide support to the parents of living donors is highlighted. A comprehensive range of Master Themes are generated through Interpretative Phenomenological Analysis and these reflect the complexity of the donation experience. This suggests donors are concerned with the management of psychological experience rather than with reviewing the appropriateness of an original decision to donate. A counselling perspective, with Social Cognitive Theory at its core, is highlighted as a valid method for providing professional support to donors (before and after surgery). Evidence indicates that Attribution Theory, self-efficacy beliefs and the concept of locus of control, can develop understanding of the psychological experience of being a living kidney donor. The implications for how potential donors are both selected and supported are discussed.

PROMOTING AWARENESS OF THE NURSING STAFF ON THE TOPIC OF ORGAN DONATION AND TRANSPLANTATION

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Definition of the problem:

A single organ donor can save up to 9 lives. We have found that most of the population are in favour of organ donation, but when "reality knocks at the door", there arise additional sources that delay receiving permission for the transplantation. The main stumbling block to organ donation is the emotional coping of the public and the nursing staff.

Basic premise:

A team with a well based knowledge that believes in the cause of organ donation and that it is correct, in and of itself, to donate organs, and will show cooperation for the advancement of the issue while presenting this to the candidates for transplantation. Preparation of a questionnaire to be filled out anonymously by the nursing staff, in order to examine their basic level of knowledge and attitudes on the topic of organ donation and transplantation in the country.

Results:

In general, from the questionnaires, it becomes clear that the level of knowledge of the teams was high by a considerable percentage in relation to the average. In a few areas there is a need for reinforcement. The questionnaires showed positive attitudes in reference to organ donation (66%). But in reality only 37% of the nursing staff stipulated that they had signed donor cards. Increased awareness of the acting staff and guidance in coping with situations of sudden death will influence the cooperation of the team.

HOW HAVING A COUNSELLOR AS A DONOR ADVOCATE LED TO THE COMPILATION OF BEST PRACTICE GUIDELINES FOR THE EMOTIONAL CARE OF LIVING DONORS

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Guidelines produced by the Renal Association for Living Donor Kidney Transplantation promote the concept of informed consent and recommend that all living donors should have access to a donor advocate as a means of facilitating informed decision making. A four centre study identified only one Centre routinely offering the services of a dedicated counsellor as a donor advocate, thereby demonstrating a gap in psychological care provision for donors and their families during this stressful time. Feedback received from nurses in participating Centres, indicated a lack of awareness relating to issues surrounding the donor search, family dynamics, decision making process and the experience of 'being worked up'. Indeed many nurses commented that there was more complexity to living donation than recorded in existing literature or commonly acknowledged by professional renal team members. No standards of practice that are truly evidence-based are currently available to facilitate better understanding within multi-disciplinary renal teams of the donor's emotional journey through the Living Transplant programme. Therefore, the aim of these Guidelines, which are not intended to be restrictive or prescriptive, will show that the psychological management of potential donors cannot be seen separately from their clinical and medical care and that integration offers the best standards of care to this client group. It is hoped that recognition of the dilemmas faced by donors will facilitate further debate about the value of donor advocates on Living Programmes and lead to renal counsellors becoming integrated members of Transplant Teams.

AN INSTITUTIONAL EXPERIENCE WITH EXCHANGE OF KIDNEYS AMONG ABO INCOMPATIBLE LIVING RELATED DONOR-RECIPIENT PAIRS

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Background: Renal transplantation from living donors is a partial solution to the shortage in cadaveric organ donations. Unfortunately, approximately 30% of living donor-recipient pairs are incompatible in their ABO major blood groups. Exchange of kidneys among matched incompatible pairs may maximize the utilization of this important source of organs.

Our Experience: Since 1997 a total of 16 incompatible living related donor-recipient pairs entered our exchange program. To date, five recipients from three pairs received exchange transplants, whereas four recipients received cadaveric kidneys while on the exchange waiting list.

Pair # 1: A doubly successful exchange transplantation involving a Jewish couple and a Muslim couple has resulted in a lasting social relationship.

Pair # 2: Loss of one of the exchanged kidneys due to rejection resulted in marked hostility toward the staff and toward the pair whose transplant succeeded.

Pair # 3: During the period of preparation, a potential recipient developed severe cardiac problems and was deemed unsuitable for surgery. Nevertheless, his aunt went ahead with an altruistic donation for his counter-recipient, to whom she had become very attached.

Conclusions: 1. The exchange program among incompatible donor-recipient pairs is a valuable source of organs, and should be encouraged. 2. The exchange process provokes intense emotions that may result in acts of kindness and brotherhood, bridging differences in ethnic, social and religious background, but on the other hand might also alienate individuals, especially following graft rejection. Therefore, candidates should undergo careful selection, evaluation and preparation.

THE AWARENESS AND ACCEPTANCE OF PUBLIC TOWARDS TISSUE AND ORGAN DONATION

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Background: Limited data are available concerning knowledge and awareness of the public towards organ donation and transplantation. According to the Turkish law (1982) organs of those who lost their lives on accidents, natural disaster can be removed without the family's consent. However families are to be informed and consent obtained after the procedure.

Objectives: To investigate the knowledge and the awareness of the public about organ donation and transplantation including the legal requirements. And to assess whether having a family member who is a candidate or who had died whilst waiting for an organ would have differential result on their knowledge and acceptance.

Methods: A prospective study was planned. Data (n:774) were gathered from a structured questionnaire. The questionnaire consisted of 39 items designed to assess subjects' knowledge about the several aspects of organ donation, and transplantation.

Results: The results indicated that, 96.6% heard of the organ donation and transplantation. The 91.8 percent approved donation and would live with other's organs. While, 91.7% would donate to blood-relatives, only 59.2% would consider donating organs of own. 14.9% of the subjects knew someone who was candidate for an organ. Significant associations were found between respondents' awareness of the problem, willingness to donate organs, acceptance of organ donation and their level of education and gender.

Conclusions: Since the results indicated that, nearly two thirds of the public surveyed had positive thoughts towards organ donation, and majority have heard organ donation. Nevertheless, 81.7% were interested to have more information on the issue

ATTITUDES OF MEDICAL PERSONNEL TOWARDS CADAVERIC ORGAN TRANSPLANTATION

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In this paper we examined the positions of medical personnel in a dialysis unit and in an intensive care unit towards cadaveric organ donation. Our assumption is that one of the reasons that the percentage of organ donation or the willingness to sign a donor card among the general public is so low is the ambivalent stand of medical and nursing personnel towards organ donation. In our opinion, these attitudes stem from a lack of understanding and lack of knowledge among the staff who care for patients who are potential donors, actual donors and those who are in need of organs. We issued questionnaires to doctors and nurses in an intensive care unit and a dialysis unit. We found that in general, the staff of both units were in favour of organ donation, however when it came to donating their own organs or those of their families, the percentage of agreement was much lower, especially when it concerned their children. There was a difference concerning their said beliefs and their willingness to actually donate. In the dialysis unit the percentage of those who agreed to donate in general and those who agreed to donate their own or their families' organs was higher than in the intensive care unit. However the ratio between the said belief and actual agreement was consistent for both units. In our opinion, better education of medical and nursing staff and a clarification of their attitudes would positively influence the general public's willingness to donate organs for transplant.

MULTICULTURAL NURSING APPROACHES IN TRANSPLANTATION

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Introduction

The recent rapid changes in population and demographics may affect Nursing of Transplantation as well.

Patients and Methods

In our Unit, 655 patients had a renal transplantation during the last twelve years. Among them: 28 patients had non-native nationality, 24 patients belonged to religious minorities, 5 patients were of different racial origin and 12 patients had various social and communicative problems due to their recent return to their homeland.

Aim

The aim of this study was the thorough report of the cultural and other special characteristics of these groups. In such a way possible problems that arise from different cultures could be managed with sensitivity and effectiveness in order to receive the best possible care within the grounds of Nursing Science.

Results

No significant problems have been observed either on the immediate or during the post transplantation period.

Conclusion

When patients and health professionals originate from different cultures, they usually have different views and expectations about behaviour and compliance. Nurses must show sensitivity and understanding for each patient's personal background, religious beliefs and cultural heritage, in order to achieve reduction of fear and insecurity that usually accompany the experience of the disease.

THE INFLUENCE OF SOCIO-DEMOGRAPHIC FACTORS ON RENAL ALLOGRAFT SURVIVAL, LATE ACUTE REJECTIONS AND HOSPITAL STAY

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Objective: We evaluated the impact of pre-transplant learning disabilities (mental status, cognitive functioning, language problems, no social support), race, ethnical background, non-compliance and smoking behaviour on patient and graft survival, late acute rejections and hospital stay.

Methods: A prospective cohort design was used. Data were obtained from a database that contained all screened patients (n=893) for kidney transplantation since 1996 until 2003. Inclusion criteria for this study were being > 18 years old, being > 1 year transplant status, received a single cadaveric kidney transplantation yielding a study sample of 492 patients. Logistic regression analyses were performed to identify socio-demographic and medical variables (BMI, nr of received transplants, HLA mismatch, cold ischemic time, donor age, %PRA, co morbidity) associated with increased likelihood of graft loss, death, occurrence of late acute rejections and prolonged hospital stay. **Results:** There is a significant impact of socio-demographic variables on graft survival and hospital stay. Patients with an existing pre-transplant learning disability (no social support and not speaking the language) are at higher risk for graft loss and prolonged hospital stay. Smoking is associated with the number of transplants and decreased graft survival. Cardio-vascular co-morbidity was associated with a prolonged hospital stay.

THE ETHICS, LEGALITIES AND POLICY ISSUES OF LIVING DONOR TRANSPLANTATION FROM THE INDIAN SUB-CONTINENT, WITH SPECIFIC REGARD TO DIFFERENT VALUE SYSTEMS

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There is a difficulty in transplanting the significantly high proportion of patients of South Asian origin on the national renal transplant waiting list. Soon, we realised the need to consider relatives that were resident overseas, ie. in the ISC, as potential living donors.

There are different spiritual and social belief systems affecting the favouring of this approach. Professionals facilitating this could demonstrate respect for cultural values and language differences. However, the issues are complex, abound with many ethical and legal considerations, including elements of the *Human Rights Act (HRA 1998)* as to whether and how such a programme should be implemented. This paper sets out to discuss these.

In our own unit, a culturally sensitive approach was adopted. Significant numbers of potential LD's were assessed to varying degrees, with some variable outcomes. It is important to address issues of consent, given the language differences and possible incentives. There is concern that reciprocity, ie. An exchange of favours, may be taking place. However, the nature of the relationship, with regard to religion, and cultural need to act and reciprocate also has to be borne in mind. Certain rights also need to be respected to allow LD from overseas, e.g. Respect for autonomy, in line with The HRA 1998 anti-discrimination article for right to act, and freedom of expression are also relevant.

Recommended consideration of distantly related persons, to meet cultural needs, and avoid discrimination. Assessment on an individual basis with equitable and culturally sensitive care eg. information giving and after-care following multi-disciplinary guidelines.

Poster orally presented

KIDNEY DISEASES AND QUALITY OF LIFE

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The aim of the work was to compare quality of life between haemodialysis and peritoneal dialysis patients.

Methods: The object of this work was patients on haemodialysis and peritoneal dialysis in Vilnius University Antakalnis Hospital. 87 people filled the KDQOL-SF™ thirty seven item questionnaire. Statistical data were performed with special KDQOL-SF™ Version 1.3 Scoring Program (v 2.0). People different in age, sex, social status and education were tested.

Results and conclusions: 56 patients treated by haemodialysis and 31 patients treated by peritoneal dialysis filled the KDQOL survey. Compared to a peritoneal dialysis patients sample, haemodialysis patients had lower quality of life on almost all dimensions of KDQOL survey. Analyses showed HD to have significantly greater impact on quality of life compared to PD on such dimensions: effect of kidney disease (mean of PD patients answers were 70.36, HD - 49.5, p value - 0.048), burden of kidney disease (PD - 48.79, HD -24.33, p -0.021), dialysis staff encouragement (PD -89.11, HD -69.64, p- 0.019), patient satisfaction (PD -90.32, HD - 70.83, p-0.015), role-limitations emotional (PD- 46.24, HD - 26.79, p-0.069) and social functions (PD - 82.26, HD -61.38, p-0.027). There were no obvious differences in: symptom/problem list, work status, sexual function, sleep and general health.

SHUNT-BLOODFLOW WITH BLOOD TEMPERATURE MONITOR

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We calculate the shunt-bloodflow through a series of recirculation measurements with the blood temperature monitor (BTM) of Fresenius. This data is analysed with the formula postulated by Lopot (2001).

Our experience of this method with the reversed needle connection is that it is highly accurate and easy to carry out. With this data it is possible to find the shunts with inadequate as well the ones with high bloodflow.

If more than one measurement is taken over time it is also possible to give a prognosis on the future shunt function.

For the last two years we analysed our shunts with that method and have a great deal of experience with this kind of analysis. There have been nearly no more shunt occlusions since we started doing this highly beneficial work for the patients. At least 20 shunts have been saved from shunt thrombosis with an Angiography and dilatation of the stenosis.

It is not necessary to have an expensive ultrasonic device to determine the shunt-bloodflow, it is also possible with this blood temperature monitor.

VARIABLES ASSOCIATED WITH DIALYSIS PATIENTS' ACHIEVEMENT OF TARGET HAEMOGLOBIN: BASELINE RESULTS FROM A LARGE EUROPEAN STUDIES PROGRAMME

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The objective was to identify variables associated with dialysis patients meeting Hb concentrations ≥ 11 g/dL (EBPG standard), to inform efforts to improve anaemia management. Baseline Hb concentrations of dialysis patients were measured prior to switching from recombinant human erythropoietin (rHuEPO) to darbepoetin alfa. 4792 subjects with baseline Hb concentrations of 10-13g/dL and adequate iron parameters (serum ferritin $\geq 100\mu\text{g/L}$ or TSAT $>20\%$) were recruited between September 2000 and August 2001 in 8 multicentre studies in 12 European countries. Patients were evaluated for demographic and clinical characteristics including the presence of several co-morbid conditions. A logistic regression model was fitted using a forward stepwise algorithm with $p \leq 0.1$ as the inclusion criterion to determine variables associated with a failure to achieve Hb ≥ 11 at baseline. Variables included were age, gender, specific co-morbid conditions, dialysis modality, route and frequency of rHuEPO administration, weekly rHuEPO dose (<6000 vs. >6000 IU/week), and time on dialysis >1 year (OR=1.47; 95% CI: 1.19-1.83), and rHuEPO dose <6000 IU per week (OR=1.74; 95% CI: 1.00-3.03). Only 74% of this population, from which patients with Hb <10 g/dL were excluded, had Hb concentrations ≥ 11 g/dL. Our data show that there is room for significant improvement in anaemia treatment of the European dialysis population.

NOCTURNAL HOME HAEMODIALYSIS: FOCUS ON THE PARTNER

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Background: Nocturnal home haemodialysis results in a better clinical psychosocial condition of dialysis patients. However this intensive therapy has consequences for their partners, who bear some responsibilities during the treatment, as well.
Methods: Since December 2001, we included 15 patients in a Dutch nocturnal home haemodialysis (6 times a week 6 - 8 hours) project ('Nocturne'). All patients are assisted by their partner. One of the aims of Nocturne is to investigate the effects on the partners and using questionnaires and interviews.
Results: Nocturnal home haemodialysis affects the daily life of partners more than conventional therapies. Partners feel involved with the treatment. The invasion of the treatment in bed, the noise of the machine, the daily assistance, the sense of less freedom and the co-responsibility for the treatment are sometimes felt as a burden, specially during the first months. However the improved clinical condition of their spouse, resulting in less fatigue, less disability, fewer complications, more attention for and contribution to family life, better quality of life, are felt as major improvements, with important effects on the quality of life.
All partners judged nocturnal home haemodialysis, despite the negative consequences as a major improvement of their lives.
Conclusion: The positive effects of nocturnal home haemodialysis are more important than the negative consequences for the partners of the patients. However partners need support by caregivers, especially during the first months of the treatment.

LONG TERM FOLLOW UP OF A CAPD PATIENT WITH MENTAL-MOTOR RETARDATION

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Since continuous ambulatory peritoneal dialysis (CAPD) treatment requires active participation of the patient, some criteria should be made for patient selection. One of the most important of these criteria is a communicable mental status. But while deciding the treatment, the life style and personal characteristics of the patients, and the family's wish should be considered. We present here a 9 year old girl with mental-motor retardation (MMR) who has been on CAPD treatment for 6 years, admitted to hospital in 1996 with end stage renal disease due to reflux nephropathy. She is the only child of 40 and 41 year old parents, a diabetic and illiterate mother and a primary school graduate father, living in a village. She was a mute and deaf patient with MMR, agitation and no cooperation at all. Since there was no haemodialysis facility where they live the patient was taken into CAPD program by necessity. An intensive education was given to the mother. During the first 7 months she had 3 peritonitis attacks. She had the fourth one due to catheter complication in the 3rd year of the treatment. She has been followed up without any infection since then, with a favourable general condition. With this case we would like to emphasize the importance of the needs and wishes of the family in the outcome of the treatment while deciding the dialysis modality.

ANALYSIS OF DEPRESSION IN DIALYSIS PATIENTS

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It is well known that depression worsens the quality of life in end stage renal disease (ESRD) patients receiving dialysis. However, the characteristics of depression in dialysis patients have not been analysed in detail. We performed this study to investigate the severity of depression and the factors affecting depression in dialysis patients. The sample (n:82) included 51 HD and 31 CAPD patients (42 men, 40 women, mean age 48.0, SD+14.7, range 18-71). The mean duration of dialysis treatment was 3.1 years (SD: 2.6, range 0-15). We evaluated each patient's depressive mood with the Beck Depression Inventory (BDI). According to BDI scales, 47.6 % of our sample had signs of moderate, 26.8 % showed signs of severe depression and 25.6 % showed no signs of depression (Scoring 0-63; 25 severe depression; Total score mean 19.7, SD+ 9.5, range 3-46). More dialysis patients experienced severe depression compared with the general population. If we separate our sample according to gender, an important distinction was evident: women were more depressed than men. On the other hand, unemployed patients had higher BDI scores when compared with employed patients ($p < 0.05$). Moreover, there was a significant relationship between depression and the length of dialysis treatments ($p < 0.05$). The results of this study could be used as baseline data to improve and promote psychological well-being in patients treated with dialysis.

HAEMODIALYSED PATIENTS AND THE QUALITY OF LIFE

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The aim of our research is to point out the physical efficiency of haemodialysis patients and its connection with their educational level.

Method: In 2002 we studied 20 patients (therapy 1 to 5 years), 11 men, 9 women, aged from 31 to 86 (average 66±17.9). The educational level of the patients is divided into 3 levels (highly educated, middle level and low level of education).

The way in which physical exercise is checked, has been done with the following questionnaire:

Very light - sedentary position.

Light - walking on a horizontal level, shopping, housework.

Average - cycling, dancing and farming activities.

Vigorous - walking up a steep road, digging or doing sports.

Results:

Sex	Age	Very light	Light	Average	Vigorous
Male	72 ± 14.8	1 (9.5%)	2 (18.5%)	4 (36%)	4 (36%)
Female	64 ± 13.8	2 (22.0%)	3 (33.0%)	3 (33%)	1 (12%)

Five men had reached an average level of education; three men had a high level of education; while one woman had a high level of education. Two women with very light physical exercise had disorders in their musculo-skeletal system, while one man was in recovery after a heavy pulmonary infection.

Conclusions: It has been shown from our research that men exercise more than women. Physical exercising has more to do with the educational level than with that of the age. Our message towards our patients, who suffer from serious health problems, is "The more physical exercise - the better health you can achieve" and "Little physical exercise is better than nothing".

THE RELATIONSHIP OF FREQUENCY OF PERITONITIS WITH TOTAL Kt/V, RESIDUAL KIDNEY FUNCTION, AND SERUM ALBUMIN LEVEL IN PERITONEAL DIALYSIS PATIENTS

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Objective: In this study, the relationship of total Kt/V, residual kidney function (RKF), and serum albumin levels with frequency of peritonitis, and hospitalisation was investigated.

Method: Thirty-six patients, who had been receiving peritoneal dialysis (PD) therapy for at least six months were included in the study. Dialysis adequacy tests were applied to the patients within three months following the start of PD, when the patients were euolemic and stable, and again after 6 months.

Findings: When 21 patients who never had peritonitis (Group P-) were compared with 15 patients who had peritonitis at least once (Group P+), total Kt/V was found significantly higher in patients who didn't have peritonitis than in patients who had peritonitis (p = 0.03). No significant differences were found between Group P- and Group P+ with respect to age, dialysis duration and RKF. When the patients were divided into two groups as total Kt/V <2.1 (Group D-) and total Kt/V >2.1 (Group D+), the frequency of peritonitis was higher in Group D- (p = 0.005). RKF was higher in Group D+. The mean age in Group D- was significantly higher compared to Group D+ (p = 0.0001). No significant differences were found between Group D- and Group D+ and between Group P- and Group P+ in serum albumin levels, total cholesterol, creatinine levels, and duration and frequency of hospitalisation.

Result: Peritonitis is seen less frequently in patients with high total Kt/V and RKF.

THE EFFECT OF PERSONALITY AND MENTAL STATUS ON THE COMPLICATIONS OF PERITONEAL DIALYSIS

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In order to investigate the relationship of the personality traits and mental status of the patients between PD complications (infectious and non-infectious) we performed a cross-sectional study. Ninety-six PD patients (CAPD 66%, APD 34%) between ages 18-60 (mean 41.54 ± 11) were included in the study from 4 peritoneal dialysis centres. Beck Depression Scale and Problem Solving Inventory were used to evaluate the personality traits and mental status of the patients and the personality traits were classified as hasty, thoughtful, avoiding, evaluating, confident and orderly.

We found that there were no relationship between the non-infectious problems (hypervolemia, leakage, catheter malfunction) and the personality traits.

We found an association between the dialysis duration (months) and thoughtful attitude (P<0.05). The orderly attitude was more common among the patients who used APD (P<0.05). Eighteen percent of the patients had depression. There was a significant relationship between infectious complications and presence of depression (P<0.05).

Presence of depression showed a negative correlation with age and this was found to reach statistical significance in the patients with orderly and confident attitude as the age increases (P<0.05). Peritonitis was more common in patients with avoiding attitude and exit site infections were more common in patients with hasty attitude; however these findings were not statistically significant.

LATE CONSEQUENCES OF NON-COMPLIANCE AFTER RENAL TRANSPLANTATION

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Aim of the study: Compare the incidence of late acute rejections (LAR) between compliers and non-compliers with immunosuppressive therapy more than 1 year post transplant. Methods: Using a prospective descriptive design, 146 adult renal TX recipients (56% males; median age of 47, IQR: 19) varying in time post-TX (median 4 years; range: 1-18 years) were followed during a five years period. Patients were interviewed at inclusion in the study regarding their intake of immunosuppressive medication. Patients were categorized as non-compliers if they admitted to have skipped immunosuppressive medication on a regular basis during the previous 12 months. The occurrence of LAR during the 5 year follow-up period was recorded.

Results: The sample comprised of 22.6% non-compliers of which 21.2% experienced LAR compared to 8% in the group of compliers at 5 years post-inclusion (p=0.05). Kaplan Meier survival analysis showed a decreased rejection free time in non-compliers compared to compliers (p=0.03). After controlling for time dependency multivariate Cox regression analysis (Log Likelihood: 116.1; Chi square: 18.8; df: 6; p=0.005) show that non-compliant patients have a 3.2 higher risk of late acute rejections. Other factors included in the model were time post-TX, (RR: 0.98; p=0.31), time post-TX * T (RR: 1.00; p=0.49), age at time of TX (RR: 0.95; p=0.04), donor age (RR: 1.06; p=0.06), and donor age * T (RR: 1.00; p=0.11).

Conclusion: Cross-sectional assessment of NC in renal TX patients more than 1 year post transplant is associated with an increased risk for LAR during the next 5 years.

INTRODUCTION OF THE DIALOCK HAEMODIALYSIS ACCESS SYSTEM

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Problem: Patients requiring haemodialysis require reliable and safe vascular access. Traditional choices for vascular access have numerous disadvantages. There is a need for improved vascular access to provide adequate dialysis treatment, more comfort and a better lifestyle for the patient.

Design: The Dialock (Biolink®) was inserted in the first patient in May 2001 and since this date a further 9 Dialocks have been inserted under radiological guidance and sedation alone. All were immediately used for dialysis. Data have been collected for each of these patients providing information on BFR / KT/V / Infection rates and complications experienced. Individual case studies have been prepared to provide a more detailed history.

Findings: 10 patients (Age 27 - 75) have had successful implants of the Dialock device (2 Femoral 1 Subclavian 7 Jugular) 1 patient has switched to CAPD (device still functioning) and 1 patient dialyses at home. No devices have failed or been removed. 5 patients have been treated for line sepsis. Mean time of device in 257 ± 71 (28-650) Days. Mean sepsis rate 3.5/1000 Cath days Mean KT/V 1.1 ± 0.12 (0.4 - 1.4) Mean QB 310 ± 18.5 (200 - 400) ml/min

Conclusion: Initial findings suggests the Dialock device is a beneficial alternative for long-term access for patients that have had failed previous vascular access attempts, and would otherwise have had a tunnelled central venous Catheter. All patients expressed satisfaction with the device and the nursing staff have reported satisfaction with the use of the device.

TREATMENT MODALITIES IN TERMINAL RENAL FAILURE IN CHILDREN OVER 2 DECADES

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The prevalence of chronic renal failure in the world population 0-20-year of age is 80/million population. The global incidence of terminal renal failure in children up to 18 years is 6-10/million population and 6.5/million in Croatia. These children survive owing to renal replacement treatment - dialysis, or kidney transplantation. The purpose of the investigation was to analyse changes in treatment modalities in terminal renal failure between the periods 1983-1992 and 1993-2002 in a specialized paediatric dialysis centre. A total of 91 children aged 6 months - 18 years were treated. Over the first decade 41 children were treated: 33 (80.4%) with haemodialysis and 8 (19.6%) with type CAPD peritoneal dialysis. Over the second period 50 children were treated: with haemodialysis 26 (52%), with peritoneal dialysis (types CAPD or APD) 20 (40%) children and with pre-emptive kidney transplant 4 children (8%). The development of the health system and the use of multidisciplinary approach in the treatment of children, the development of medicine and technology and improved socio-economic conditions of life both in towns and in the country, have increased the interest for home dialysis methods and transplantation without pre-transplant dialyzing. In selecting treatment methods, no differences are made between ethnic groups or cultures. The availability of information and improved health education of our population has induced the wish that parents actively participate in the treatment, in order to ensure their children's optimal life quality.

MANAGING CULTURAL DIVERSITY

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The South Bristol Dialysis Unit is situated in a culturally diverse area of Bristol, as such it is important to enhance and build cultural competence and awareness among staff. Culture describes a group's shared values, tradition, beliefs, customs, stories and art. Cultural competence describes people and organisations that work well within their own and different cultural groups. This involves the nursing teams' attitudes, practices, behaviours and policies.

A team refers to a group of people who need each other to accomplish a result, building upon awareness, communication and skills to better serve customers, clients and employees, thus creating a culture of respectful interaction and building positive working relationships. Teams can work out how to learn as a group, function as a whole and seek a shared vision. Cultural norms build awareness of different experiences, allowing acceptance that each person sees the world differently, helping to ease conflict or uncomfortable situations. This paper describes the process we have undergone to meet these challenges. The support of internal facilitators and consultants, and the introduction of training programmes to improve and maintain effective communication skills. Staff surveys highlight areas for improvement. Informal discussions and feedback sessions are held on a regular basis, to manage daily workplace diversity dilemmas and develop group wide values. All of this is further supported by our organisations' values, vision, mission, policies, procedures and objectives and constitute a culture that is manifested in multiple perspectives and adaptability to varying values, beliefs and attitudes.

THE MANNOMETRIC PROFILE OF NATIVE ARTERIOVENOUS FISTULAS (PRELIMINARY RESULTS)

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The monitoring of the venous pressure is one of the most important parameters to consider during a dialysis session. It refers to the security and also the efficiency of haemodialysis. The objective of this study was to determine the mannometric features of the native arteriovenous fistulas (AVF) and to research the parameters, which are involved in its variations. This transversal study was carried out in Avicenne hemodialysis centre Casablanca and included only the patients with native AVF. We excluded the patients with other forms of vascular access. The results were treated with Epi-Info 6.04 software. The preliminary results we obtained were about 22 patients (70% men) and 66 sessions. The mean age of the patients was 43.22 years, all of them were dialysed three times a week, 4 hours per session. Hypertension and diabetes were the most important causes of their chronic renal failure. Radial AVF was the most frequent vascular access (68% of cases). The mean age of AVF 39.7 months. The mean venous pressure (VP) was 95.76 mmHg Statistical analysis showed differences in VP according the localisation of AVF (p<0.003), the age of AVF (p=0.01) and the presence of stenosis or partial thrombosis after the needle insertion (p=0.0004). The transmembrane pressures were correlated with the VP and with the occurrence of hypotension during session. We conclude that the VP should be monitored according to reference rates for age and localisation in order to detect early the presence of stenosis or partial thrombosis.

MIND DISTRACTION AS TECHNIQUE FOR PAIN RELIEF IN PATIENTS ON HAEMODIALYSIS

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Background: Inserting a needle during Haemodialysis (HD) is painful procedure. Literature states that pain is one reason for patients' refusal to HD. Is it possible to provide painless HD? Alternative techniques for pain alleviation existed since man felt pain. Research on alternative techniques began only recently. One main method is "mind distraction" - focusing attention on stimulations other than pain.

Aims: 1) Reduce pain in dialysis treatment; 2) Check the extent to which patients are troubled by pain; 3) Check if mind distraction can alleviate pain; 4) Check which methods are used by patients; 5) Propose practical ways to alleviate pain; 6) Compile an intervention program; 7) Achieve cooperation with Management.

Process: Review of literature; Interview 24 HD patients, using questionnaires; Presenting results to staff; Compiling of intervention program in cooperation with Pain Clinic.

Results: 67% of patients prioritise pain at medium-high; 21% think of pain at home, 25% at the unit, 25% before connection, 4% think "constantly", 25% ignore; 100% report negative feelings during needle insertion; 100% think pain can be alleviated by mind distraction; 100% use distraction consciously or subconsciously; No distraction techniques are used by staff purposely.

Conclusions: Needle insertion pain causes negative feelings; Using mind distraction can alleviate pain; Patients can be instructed on distraction techniques.

Recommendations: Raising awareness of staff to alternative techniques; Providing staff with relevant knowledge and encourage experience; Providing staff with tools for identification of respective patients; Encourage multidisciplinary cooperation; Writing a protocol for pain management; Obtain resources from Management.

NOCTURNAL HOME HAEMODIALYSIS, ONE YEAR EXPERIENCE

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Background: Nocturnal home haemodialysis (NHD, 6-7 times weekly 6-8 hours) is a promising dialysis modality. Since December 2001, 15 patients were included in a NHD project. So far, 3 patients received a renal transplant. After one year experience, methods and results are evaluated.

Methods: Patients are assisted by their spouse. Because the patients sleep during dialysis, safety is a major issue. The dialysis machine is connected to the server in a call centre. Shunt and connections are protected by special bandage and a leak-detector. Blood volume is monitored. All patients have been closely followed on physiological and social effects.

Results: Our safety measurements turned out feasible and sufficient.

The online-monitoring gives patients a sense of security and helps nurses to coach the treatment. Blood volume monitoring helps in adjusting the ideal body weight. The improvements are impressive. The nutritional status improves, resulting in a weight gain (73.3±17.7 to 76.0±18.6). Blood pressure normalizes (mean arterial pressure 107.8±16.4 to 94.6±8.4) and most anti-hypertensive drugs can be stopped. Dialysis-related symptoms like restless legs disappear, patients can resume a normal diet without fluid restriction, phosphate binding agents can be stopped, and phosphate has even to be supplemented to the dialysate fluid. In QOL SF 36 improves in all categories. A drawback of the treatment is that problems always occur during the night, which is inconvenient.

Conclusion: For people who are able to perform this treatment nocturnal home haemodialysis is a tremendous improvement.

SUBCUTANEOUS AND INTRAVENOUS RECOMBINANT HUMAN ERYTHROPOIETIN (rHuEPO) DOSING IN EUROPEAN DIALYSIS PATIENTS

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Patients given intravenous (IV) rHuEPO require higher doses than patients treated subcutaneously (SC) in order to achieve target haemoglobin (Hb) concentrations. We analysed baseline data from a series of European studies in which patients were switched from rHuEPO to darbepoetin alfa. Twelve European countries participated in eight multicentre studies involving 4792 patients (4684 on haemodialysis and 108 on peritoneal dialysis). Patients were required to have stable Hb concentrations between 10-13g/dL and adequate iron parameters (serum ferritin levels $\geq 100\mu\text{g/L}$ or TSAT $\geq 20\%$). Data were pooled for analysis. Proportions of patients on either IV or SC rHuEPO were compared with a Chi square test. There were 3,121 (65.1%) patients receiving SC rHuEPO and 1,671 (34.9%) patients receiving IV rHuEPO. Percentages of patients receiving SC rHuEPO ranged from 40.1% (Germany) to 98.1% (UK). Geometric mean doses for IV and SC treated patients were 5569IU/wk and 5176IU/wk, respectively. Mean doses were significantly higher in IV-treated patients ($p < 0.0001$). Mean Hb concentrations were 11.6+/-0.8g/dL (SC-treated) and 11.5+/-0.7g/dL (IV-treated). There were no statistically significant differences in percentages of IV and SC patients meeting target Hb concentrations [74.4% SC (95% CI: 72.9-75.9%) vs. 72.4% IV (95% CI: 70.2-74.5%); $p = 0.14$]. In patients with Hb $\geq 11\text{g/dL}$, the mean doses for IV and SC groups were 5569IU/wk and 5151IU/wk, respectively ($p < 0.0005$). These data confirm the previously observed higher IV dose requirement with rHuEPO and the restrictive influence this has on treatment of anemia in dialysis patients for whom IV dosing would be preferable.

IMPROVING QUALITY OF CARE FOR IMMIGRANTS WITH RENAL FAILURE

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According to the Central Bureau of Statistics, 8% of the inhabitants in Holland were immigrants in 1999; in 2010 it is expected to be 10%. There is also a rise in the percentage of immigrants with renal failure. Many dieticians have problems with communication.

Goal: Improve quality of dietary care for immigrants.

Methods: A questionnaire was sent to all dialysis units (52). Dieticians were informed about specific dietary patterns during a workshop.

Results: 49 dieticians responded to the survey. The predominant nationalities in over 50% of dialyses units are Turkish, Moroccans, Surinamese Hindustani. There is need for information about specific food and social-cultural backgrounds of different cultures (>50%). Less education material is available, especially for immigrants.

Therefore 3 seminars were organised with lectures about intercultural communication and training in preparing Turkish food.

From 52 centres, 38 centres attended (44 dieticians) the seminar. 15 centres were absent because lack of time (11) and absence of immigrants (4).

85% of the dieticians evaluated the day as good, 15% sufficient. 49% thought the information about diet and Turkish patients was enough, 44% not enough, 7% no view. 46% thought the information about social-economic backgrounds was enough, 32% not enough, 22% no opinion.

Conclusion: The survey confirmed the need for schooling and sharing experiences. Recommendation: Education material must be developed especially for immigrants to improve quality of care.

At this moment education material is being pre-tested among renal dieticians. It is to be expected that this material can be implemented this summer.

TRANSCULTURAL ISSUES RELATED TO THE NURSING ASSESSMENT OF RENAL PATIENTS

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The ever-increasing nephrology patient population comprises a cosmopolitan society of patients. In our quest for clinical excellence we are compelled to deliver culturally appropriate care to this group of vulnerable patients. From diagnosis to death, culture is entwined in every aspect of the therapeutic lifespan of these patients. To achieve culturally sensitive care nurses need to develop a knowledge base incorporating an awareness of their own culture, preferences and prejudices alongside specific information about ethnic groups. In a profession that embraces caring as its core concept, culturally insensitive care is anathema to culturally sensitive nurses. Nephrology nurses should make cultural components an integral part of their critical thinking and nursing actions. Knowledge of transcultural nursing will equip nephrology nurse practitioners to respond to ethnic diversity and develop transcultural competence. A comprehensive, holistic assessment, incorporating the patient's culture is crucial to provide quality care and ensure clinical effectiveness. Numerous transcultural issues were identified in one UK renal unit and a transcultural nursing assessment tool identified. An integrated approach utilising daily living needs of the patient with ESRD, e.g. diet, renal replacement therapy and communication with Leininger's theory of „Cultural Care Diversity and Universality“, provides a systematic framework for transcultural assessment. Nephrology nursing can meet the fundamental objective of the NHS PLAN, high quality care, by providing culturally congruent and acceptable nursing care to the special population of nephrology patients burdened with the unremitting repercussions of ESRD. This will lead to improved ESRD outcomes and enhanced quality of life for nephrology patients.

DEVELOPING DIALYSIS FACILITIES IN THE CARIBBEAN

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As a result of the pioneering work of a single nephrologist in 1976, a Caribbean island with a population of 1.5 million now has dialysis as a treatment option. A memorial kidney foundation in this nephrologists' honour, was set up, and in response to this, the Ministry of Health became involved in the support of initial treatment for renal failure. The intensive care unit at the island's main hospital boasted one dialysis machine and haemodialysis was first performed here in 1976. The nephrologist performed the dialysis himself, instructing a few nurses in the process as he went along. There was no extra funding given for this treatment, and the cost of haemodialysis made treatment unavailable to the general population. As the skill in dialysis grew, more reconditioned machines were obtained from the United Kingdom. The health service began to be restructured in 1980, spearheaded by the UK who helped divide the health service into four geographical regions. The health ministry became the policy maker, and each hospital was allowed to ask a fee for service, thus enabling the development of private dialysis units. One private unit has been opened in the central regional health authority. Over the last ten years it has achieved a live donor transplant programme, has six dialysis stations using brand new machines, dialysing 100 patients twice weekly. The author was instrumental in setting up this unit. This is her experience.

IMPROVING THE STUDENT NURSES CLINICAL PLACEMENT ALLOCATION ON AN ADULT RENAL WARD

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For student nurses arriving on the renal ward it was highlighted that training needs and learning outcomes specific to renal nursing were not identified. Following discussion with other members of nursing staff the role of Link Nurse for Students was established. The role was intended to maximise the potential learning opportunities available within the workplace. To aid this a student information package was devised. The package begins with a general introduction to the ward with the main body of the document being a detailed list and description of specific renal nursing learning opportunities available to the student such as observing access surgery and renal biopsies.

The information package also includes an opportunity for the students to complete reflective diaries and critical incident analysis. Learning packs are also available providing students with the opportunity to accurately complete nursing documentation. Each student is allocated a trained assessor before arriving on the ward. They are also allocated a co-assessor who they work with when their assessor is off-duty. This has helped to improve continuity and allows the assessors and co-assessors to discuss the student's progression through their placement.

The use of placement evaluation forms has highlighted students positive comments on the learning opportunities made available to them, staff support and staff acknowledging their learning needs. Ensuring student nurses are exposed to relevant skills pertinent to renal nursing is seen as paramount. A designated link nurse and structured information package has been seen to facilitate this aim and improve the overall learning experience.

FLIPCHART - SUPPORT FOR HHD-PATIENT

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In September 2000 we started our home haemodialysis (HHD) program at the University hospital of Linköping Sweden. Our program includes 10 patients who had proper training and education in unsupervised self-dialysis therapy or in other words performing self-dialysis at home or in our section of the dialysis unit. Patients are different and as such their learning abilities vary. With support and co-operation our training programme extended from 4 - 12 weeks depending on how confident our patients felt about self supporting HHD.

To optimise training and understanding opportunities we used very easy non complicated medical language supported by pictures which are appropriate to the learner.

Patients sometimes belong to different ethnic groups with different backgrounds and languages. Our programme has taken this barrier into consideration. The information we give is clear, unambiguous and readily understood, supported by self-explanatory pictures.

Patients with HHD require practical help at home. We have designed a well explanatory flipchart that shows the whole process step by step. The aim of this poster is to show how the flipchart which is an important part of our program, helped our patients to feel safe and confident at home.

OBESSE PATIENTS ARE EXPOSED TO INCREASED RISK OF INADEQUATE DIALYSIS

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Aim-Background: It is well known that morbidity and mortality of dialysis patients are strongly correlated to the dose of dialysis received, as measured by Kt/V. Overweight patients (BMI>27,5) have high volume distribution of urea (Vu) and if the latter is not taken into consideration in the prescription of dialysis dose (Prescribed Kt/V, Pr Kt/V) inadequate dialysis is unavoidable. The aim of this study was the evaluation of the influence of Vu on the Pr Kt/V.

Material-Methods: 74 overweight chronic haemodialysis (HD) patients from various dialysis units (44M-30F) with a mean age of 61±12,7 years and on haemodialysis for 32±26 months, were studied. None of these patients had 24hour urine output enough to influence the delivered Kt/V. The duration of the dialysis sessions was 4 hours. Pr Kt/V was calculated on the basis of the ordinary conditions prevailing in dialysis (blood flow, dialysate flow, type of dialyzer, etc) while BMI using the type BMI=BW (Kg³)/ Height (m³).

Results: Pr Kt/V was less than 0,8 in 16/74 HD patients (21,62%), was in the range of 0,8-1 in 44/74 (59,43%), between 1-1,2 in 11/74 (14,9%) and only in 3/74 of the studied patients (4,05%) was Pr Kt/V above the well accepted, as satisfactory, level of 1,2.

Conclusions: A significant percentage of overweight dialysis patients of our study received inadequate dialysis. This finding seems to be due to the lack of consideration into dialysis prescription of their high volume distribution of urea.

THE CONTRIBUTION OF THE DIALYZER CLOTTING TO ANAEMIA OF CHRONIC HEMODIALYSIS PATIENTS

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Aim-Background: Blood loss in dialyzers, during haemodialysis (HD) sessions, is usually small and occasionally significant. The aim of this study was the evaluation of blood loss in new type single use dialyzers.

Material-Methods: 253 single use dialyzers, used in 153 HD patients, were studied. Patients had been undergoing 4hour HD sessions through well functioning AV Fistulae or Grafts and, at the end of the session, blood was drawn for the measurement of Haematocrit (Ht) and Haemoglobin (Hb). Immediately after the end of dialysis, the used dialyzers were rinsed with 1000ml of 0,05% NH₃ solution in distilled water under conditions of minimal ultrafiltration and at infusion rate of 50ml/min and, subsequently haemoglobin was measured, with benzidine method, in the aforementioned solution. Blood loss in terms of red blood cells (RBC) volume was estimated by the use of the formula: RBC (ml)= Total Hb (g) in the solution X Ht (ml/dL) / Patient's Hb (g/dl). **Results:** For the sum, blood loss/dialyzer, in terms of RBC volume, was 2,06±2,94ml (range 0,01-23,9). There was statistically significant correlation between blood loss and the amount of ultrafiltrate (r=0,260 p< 0,001) and patient's Ht (r=0,175 p<0,05).

Conclusions: Blood loss in HD due to dialyzer clotting is usually small, using new type dialyzers, but can sometimes be significant and may contribute to the development or deterioration of preexisting iron deficiency anaemia. In this study, blood loss was statistically correlated with patient's Ht and ultrafiltrated volume.

FREQUENCY OF PERITONEAL CATHETER EXIT-SITE INFECTIONS AFTER SURGICAL VS. ENDOSCOPIC INSERTION

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Erythema and/or purulent drainage indicate a peritoneal catheter exit-site infection (ESI), which may progress to the tunnel infection and, in more advanced cases, to peritonitis requiring catheter removal. The lack of unique definition results in variability in reported rates of ESI between centres. From February 1983 to October 2002, in 236 adults the catheter was surgically implanted. From October 2002 to February 2003, the catheters were inserted endoscopically in 4 adults. In both groups exit-site care was performed in accordance to Peritoneal Catheters and Exit-Site Practices Toward Optimum Peritoneal Access: 1998 Update (the International Society for Peritoneal Dialysis, Official Report). Over the follow-up period there were 119 ESI (0.22/patient/year) in group I. The most common pathogens were *S. aureus* (51%), *S. epidermidis* (22%), and *E. coli* (10%), while other microorganisms caused ESI in 10% of cases. Fifty-four percent of infections were resolved without relapses, while in 21% the infection recurred. External cuffs were surgically removed in 15%, and peritoneal catheters in 10%. In group II there were no infections. However, the follow-up here should be much longer to display the relevance of the implantation technique for infection development. Catheter-related infections remain the "Achilles heel" in peritoneal dialysis. They may cause peritonitis, catheter loss and transfer to haemodialysis. Intensive patient and personnel training and continuous education, adequate exit-site care and anti-microbial treatment and early diagnosis ensure a lower incidence of these infections.

THE RELATION BETWEEN ALBUMIN LEVELS, INCOME LEVEL, SOCIAL SECURITY AND BMI IN PATIENTS RECEIVING CAPD

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The place of peritoneal dialysis among the renal replacement treatments is getting increasingly more important. It constitutes 6% to 90% of the renal replacement treatments in the different countries of the world. The importance of nutrition and albumin level, which is one of the important markers of nutrition, is great in patients using CAPD. In our study we investigated whether there is a relationship between albumin levels, which give important ideas about survival and nutrition, and social security status and income of the patients. A total of 133 patients (86 male, 47 female) monitored in our CAPD unit were studied. The albumin and Body Mass Index levels of the male and female patients were compared and no statistically significant differences were found. It was investigated whether there was a relationship between gender and hypoalbuminemia, and although hypoalbuminemia was more common in males (65%) when compared to females (48%), the difference was not statistically significant (in the Chi-Square test, $p = 0.052$). Hypoalbuminemia is one of the most important indicators of mortality in patients with renal failure^{1,2} and is directly associated with cardiovascular diseases³. Unlike the expected, it was seen also in our study that there was no relationship between hypoalbuminemia, which is an important factor affecting mortality, and the income and social security status of the patients.

AVOIDING ERRORS IN DIALYSIS UNIT FROM PATIENTS TRANSFERRED FROM GENERAL WARDS

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Patients hospitalised in general wards in our hospital often have to be transferred to our dialysis unit to undergo haemodialysis. We found that they often came without crucial information that was vital for carrying out this procedure efficiently. Fifty consecutive charts of such patients sent for dialysis were analysed to assess these communication errors: Results: The following were not sent to the dialysis unit from the general wards: Fluid balance information for that day 47/50 (94%). Identification wrist bracelets 6/12 (50%). Written orders for blood transfusion 5/7 (71.4%). Written orders for IV antibiotics 9/10 (90%). Special patient identification stickers for putting on test tubes 26/50 (52%). Blood tests that were required by the general ward to be done on dialysis 1/13 (8.46%). After analysing these results we reached the decision that these poor results were due primarily to lack of understanding about the mechanism of dialysis and the dynamics of the dialysis ward by general ward nurses. We prepared a check-list to be filled out by the nurses on the general wards for all patients who were to be sent for dialysis with all the necessary information that the dialysis nurses needed to carry out this procedure. We then met with the nurses in the general wards to both explain the checklist and to explain about the dialysis ward and treatment. This has resulted in much better communication between the nurses in the general and dialysis wards and accordingly less errors on dialysis (data to be presented).

PATIENTS ASSESSMENT OF THEIR HEALTH STATUS BEFORE AND AFTER KIDNEY TRANSPLANTATION IN ESTONIA

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Introduction: The most preferred treatment of kidney replacement patients is kidney transplantation, which improves significantly their life quality.
Aim: To assess health condition prior to and following kidney transplantation.
Patients and methods: A questionnaire including the questions of SF-36 (RAND 36-Item Health Survey Version 1.0) was used. The questionnaire was distributed between April and June 2002 among 110 patients with kidney transplants. A total of 75 patients (mean age 46.6; range 18-70 years), participated in the study, among them 37 were women and 38 were men. The average age of the respondents at the time of kidney transplantation was 42.4 (age range 16-67) years. The results of the questionnaire were compared for the age groups =45 years ($n=35$; 48%) and >45 years ($n=39$; 52%) and for the survival groups =1 year ($n=21$); 1-5 years ($n=29$); >5 years ($n=24$). The difference was considered significant at $p < 0.05$.
Results: Forty-five of the 74 respondents (60.8%) regarded their health condition as excellent, very good or good; among them 26 (74.2%) were aged =45 years and 19 (48.7%) were aged >45 years ($p=0.0$). Health state after kidney transplantation improved (much better, somewhat better) in 88.6% of the respondents aged =45 years and in 82.1% of the respondents aged >45 years ($p=0.84$). There was found no statistical difference in the assessment of health state between the survival groups at the time of the study.
Conclusion: The study showed that the health state of the patients improved significantly after kidney transplantation irrespective of the time that has passed from the operation.

VOCATIONAL REHABILITATION IN CHRONIC HAEMODIALYSIS PATIENTS

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The aim of this study was to examine factors associated with employment status. 171 patients age 16-59 years on chronic dialysis were interviewed about their current work status. 36% of them were employed (47% men, 21% women). Sex, age, education, family, planned transplantation, serum P and Ca were significantly different among working and nonworking patients. Unemployed haemodialysis patients scored lower than those employed in general health (SF-36 quality of life questionnaire). The level of depression (Zung SDS Index), anxiety, sensitivity and introversion (short form MMPI) were significantly higher in nonworking patients, opposite the scores in spontaneity were higher in working patients. The most significant correlates of employment (Fisher multiple comparison test) were male gender (p= 0,0038), low level of depression (p= 0,0075) and high level of education (p= 0,032).

FLUID BALANCE - A DIFFICULT CONCEPT TO GRASP

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Introduction: An important aspect of the management of patients with ESRD is the control of fluid balance.
Aim: To evaluate the effectiveness of a fluid education booklet given to haemodialysis patients. **Design:** 56 randomly selected haemodialysis patients were anonymously asked to complete a questionnaire to assess current knowledge on fluid balance. On completion, patients were provided with the fluid education booklet detailing their own fluid allowance and an explanation of fluid management portrayed as a cartoon character. 4-6/52 later, patients were asked to complete the same questionnaire.
A Healthcare Assistant was responsible for distributing and collecting the questionnaires and booklet. No verbal advice on fluid management was given. Questionnaires were analysed and population comparisons made as no individuals could be identified. **Findings:** 87% of patients felt it was very important to control fluid intake when completing questionnaire I, but this increased to 96% after reading the booklet. Initially 87% patients reported knowing their fluid allowance but this increased to 98% following education. Patients understanding of foods with a high fluid content improved but there was no improvement in knowledge relating to the effects of high fluid gains. There was no correlation between the number of years on dialysis and knowledge.
Conclusions: The fluid education booklet has demonstrated an improvement in knowledge relating to both the importance of controlling fluid balance and patients knowledge of their own fluid allowance. Further education can now be provided by all members of the multidisciplinary team to improve overall knowledge of fluid management.

IMPACT OF PREDIALYSIS EDUCATION ON DIALYSIS PATIENT CHARACTERISTICS

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Background - aims

Uraemic patients (pts) often come late on dialysis even if referred in time because of fear and reluctance, both emerging from insufficient knowledge regarding treatment options. Their treatment is started regularly with acute haemodialysis (HD), they do not have a real chance to choose between treatment modalities. To overcome this problem, a predialysis education program has been set up by the authors in January 2002.

Patients and methods

All new patients (n=32) assigned to dialysis in 2002 (Creatinine clearance - CrCl < 20 ml/min) were educated. M/F 14/18, Mean age 62,2 (22-87) yrs. Education was done by 2 renal nurses on the basis of a standardized teaching material three times in one month consecutively. CrCl values on entering dialysis, number of patients choosing CPD, treatment refusal and mortality data were compared to that of new patients taken into dialysis without education in the preceding 2 years.

Results

	Year		
	2000	2001	2002
Total No. of new pts.	24	24	39
No. of pts. without education	24	24	11
No. of pts. with education	0	0	28
CrCl at dialysis start (ml/min)	7,94	8,05	11,03
No. of planned dialysis starts	18	19	28
Unplanned (acute) dialysis starts	18	10	6
Dialysis starts with AV-fistula	6	13	9
Dialysis starts with primary Tesio	n.a.	n.a.	6
No. of peritoneal dialysis starts	0	1	7
Deaths of new pts. / year	1	3	0
Refused dialysis	18	15	4

Conclusion

Education of predialysis patients by renal nurses was successful in our experience. There were only 4 cases of treatment denial of 32 educated pts. Spouses were happy to participate in the education, their positive attitude towards treatment was an important supporting factor. The relatively high number of dialysis starting with primary Tesio cannula in 2002 was attributable to the introduction of this new access possibility. It was remarkable that with the help of education 7 pts. have chosen peritoneal dialysis, in spite of some previous negative results at the given center.

EVALUATION OF PERISCREEN TEST IN DIAGNOSIS AND MONITORING OF PERITONITIS

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The incubation period of peritonitis in peritoneal dialysis is usually 24-48 hours and occasionally shorter. There is a need for a peritonitis sensitive and specific predictor test particularly for the early period of infection, before the complete appearance of the clinical symptoms. PeriScreen test Strips (PT) are designed to give a semi-quantitative indication of the level of leukocytes in peritoneal fluids.

The aim of this study was to evaluate PT as an early predictor of peritonitis and a tool to monitor the outcome of peritonitis. Sixteen non-diabetic patients participated (age: 72 ± 5.4 years, duration of CAPD treatment: 35 ± 17.1) in a 28 months period. Patients performed 74 PTs at home; in 7 cases the PT was positive but only in four of them the culture of the PD fluid was positive, too. In all the seven cases the cell count of PD fluid was abnormally high (mean sd: $1.935 - 608,8$ leukocytes/mm³, 62- 16 % polymorphs). All seven patients received antibiotics but three of them stopped after negative cultures. During hospitalisation 49 PTs were performed to monitor the therapeutic schedule and the outcome of peritonitis. A positive correlation was found between the leukocytes of the PD fluid (cytometry method) and the PTs' results ($r=0,341$, $p < 0,05$). PT was unable to distinguish chemical from microbial peritonitis. In conclusion, PT seems to be a useful tool for the early diagnosis and monitoring of peritonitis. Patients can easily use it at home, avoiding unnecessary visits to the hospital.

EVALUATION OF MICROORGANISMS CAUSING PERITONITIS AT CAPD CENTRE

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The purpose of CAPD treatment is not only to ensure the patient's survival but also to improve life quality. Peritonitis is one of the major complications of CAPD threatening life quality. Peritonitis effects mortality and morbidity and causes hospitalisation, and is the main problem of peritonitis of CAPD. We have evaluated microorganisms isolated from 32 peritonitis episodes seen in 20 patients of 80 patients under control during 1998-2002 period at our centre.

Peritonitis was diagnosed when peritoneal cell counting was $>100\text{ml}$ (55%) neutrophilic. Gram dyeing and cultures were taken. Microorganisms were detected at 21,7 of 32 Gram spreading episodes. Reproduction was observed in 84% of 27 episodes of peritonitis. Fungal peritonitis was observed in 3 patients, and fungi were produced. The microorganisms observed were: Staphylococcus aureus: 8. Furaslar: 3. Staphylococcus epidermidis: 3. Klisealla pneumoniae: 1. Sterptros ssp: Nonfermenting: Difteroidler: 4. Crybactam SPP: 2. Enterobacteriaceae: 2. Serratia SPP: 2. Pseudomonas: 2. Staphylococcus aureus was found to cause most peritonitis episodes.

Conclusion: Patients and their families were recommended to wear masks and offered training program on ways of protection from infectious microorganisms. Nasal conveyance was also studied in laboratory. Minimize peritonitis attacks is possible with regular patient training programs. Occurrence of peritonitis in first months was particularly due to lack of education and experience of the patients and the families. This should be taken into consideration during educating and training of patients.

BIOELECTRICAL IMPEDANCE ANALYSIS FOR DETECTION SUBCLINICAL HYPERVOLEMIA IN CAPD PATIENTS

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Introduction: The absence of clinical evidence of volume excess does not exclude that of hypervolemia. The aim of the study was to evaluate the value of bioelectrical impedance analysis (BIA) to detect subclinical hypervolemia in peritoneal dialysis (PD) patients. Methods: Twenty six PD patients (F:13, M:13; mean age: $43,88 \pm 2,92$) in a stable clinical condition and at least 6 months on PD participated in the study. None of the patients had any clinical sign of hypervolemia. Vena cava inferior diameter (VCD) and BIA measurements were performed simultaneously after drainage of peritoneal fluid. Expected total body water (TBW) was also calculated for each patient by Watson formula (W). The range between the numbers calculated as W plus 3% of the body weight and W minus 3% of the body weight was accepted normal TBW for the patient.

Results: Seven of 26 patients had VCD higher than 11mm/m^2 and 12 patients had more TBW than upper limit of expected range. All of the patients with high VCD also had high TBW. The patients with high VCD had significantly higher TBW than VCD the patients with normal VCD ($67,257 \pm 263\%$ vs. $58,232 \pm 1,907\%$ of body weights, $p < 0,01$). For TBW measurement with BIA, the sensitivity was specific as 71.4% as were calculated by ROC analysis.

Conclusion: TBW measurement with BIA is a very sensitive and easy test for detection of hypervolemia in PD patients. But minor excess of TBW should be confirmed with other methods such as VCD measurement.

EVALUATION OF PATIENTS WITH CAPD IN LAST 5 YEARS

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Purpose: Technological developments achieved in health field offer alternatives for long living and high life quality to the patients. CAPD is one of the most used methods for kidney diseases replacement. We study the results of treatments in CAPD unit. Results: Total 84 patients monitored at the centre since 1998. 45 of them (53,5%) were male, while 39(46,4%) female. In CRD aetiology, nephropathy, hyper blood pressure, amyloide, chronic pyelonephrite-hypertensive glomerulosclerosis are active. No aetiological reason was found. 14 patients died for different reasons during 5 years. 4 died of MI, 1 pulmonary oedema, 2 pulmonary emboli, 2 cerebro-vascular, 3 infective complications and the death reason of 2 who died at home is not known. 6 CAPD patients were transferred to haemodialysis for various reasons. Transplantation was not applied to any of them. Now 64 patients are being monitored, and CCPD applied to 4 patients while 60 patients using double bag. Peritonitis frequency was 1/14 patients. 6 patients had abdominal hernia, 2 Catheter exit infection, 1 ileus and 2 fungal peritonitis. Catheter surgery was applied to six patients.

Conclusion: As CAPD intensively used patients with CRD live longer. CAPD is an appropriate method proved the best choice for renal replacement treatment when applied under proper conditions and to right patient group.

BURN-OUT AMONG DIALYSIS NURSES

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Introduction: Health care professionals are predisposed to mental stress during their work. This is especially true for nurses caring for chronically ill patients. There is a close relationship between mental health of the nurses and the quality and effectiveness of their work. We are talking about 'burn-out' when a nurse feels frustration during her everyday work despite her best effort.

Goal: in our survey we were aiming to explore the signs of 'burn-out' among nurses, to stratify the extent of these signs and to identify the conditions leading to this symptom.

Methods: a special questionnaire was constructed looking at physical and mental parameters that can be related to burn-out. There are 224 dialysis nurses employed in our network of 15 dialysis centres, and 195 of those have filled out this questionnaire. By qualification: 49% general nurse, 33% nephrology nurse, 18% registered nurse.

Results: scoring each questionnaire we have established 4 categories towards burn-out: no risk, low risk, high risk and manifest signs of burn-out. In 3 of the dialysis centres most of the nurses were at high risk for burn-out because of the overcrowded unit and the high level of mental stress. Good results at the rest of the centres were mainly due to the better working conditions and personal relationships.

Conclusion: The 'burn-out' effect can be prevented by providing appropriate working conditions, reducing the stress situations and paying special attention to persons identified at risk from burn-out with the help of specific questionnaires.

PSYCHO-SOCIAL STATUS OF CHILDREN ON DIALYSIS AND CONSIDERATIONS ABOUT THEIR CARE

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Regular dialysis induces insecurity and special psychological problems associated with machine- and artificial material-dependence. The more severe the child's physical problems are, the more probable it is that he/she will develop emotional disorders, a sense of loneliness and an exaggerated dependence on the parents and dialysis staff. A study of 19 children on regular dialysis in an institution was performed. There were 8 girls and 11 boys, aged 5-18 (mean: 11) years. Two children (10.5%) are exclusively treated with haemodialysis, 11 (57.9%) are on CAPD and in 6 (31.6%) both methods have been implemented. Their concomitant physical complaints are: deteriorated vision (2), reduced hearing (1), mental retardation (2, one of whom is also deaf-mute). One child has lower extremities paralysis. Among psychological disorders: an inclination to unsociability, auto-aggression or aggression towards the immediate environment have developed in 4 children (21.0%), 6 (31.6%) do not like talking about diseases while 9 (47.4%) are communicative and sociable. There are 17 school children: 3 attend special schools and 14 follow regular education programs. With the help from their teachers, children on haemodialysis can master regular school programs, in spite of the time spent on dialysis. A good and continuing co-operation of dialysis staff and sick children and their parents as well as a more intensive co-operation with psychologists and teachers are necessary to reduce psychological disorders and promote a better adaptation to the life of their healthy coevals.

REFERRAL PATTERNS FOR DIETETIC INTERVENTION AT A RENAL TRANSPLANT CLINIC

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Aim: Our aim was to determine the referral patterns for dietetic intervention at a renal transplant clinic.

Method: A retrospective audit was undertaken of the nutritional care plans of patients seen by a dietitian at the renal transplant clinic between 2000-2002. A data collection form was developed to capture patients' details, referral source and reason for referral.

Results: The main reason for dietetic intervention is weight reduction advice, however this demand is decreasing. An increase has been seen over the past three years in nutritional support advice given to patients. No significant change in the referral pattern for lipid modification and general post transplant advice was identified. Referrals for low potassium and reduced salt diets constitute a small proportion of the dietitian's workload. The number of patients referred by medical staff for dietetic input has increased significantly between 2001-2002.

Conclusion and Relevance: Results have clearly shown that weight reduction advice is not the only reason for dietetic referral at a renal transplant clinic. An increase in the need for nutritional support in renal transplant patients, often post surgery or when renal function is deteriorating, places significant demands on dietetic time. There has been an overall increase in referrals from medical staff and this may reflect an increased awareness of the dietetic service or indeed recognising the benefits of dietetic intervention.

NUTRITIONAL ASSESSMENT IN HAEMODIALYSIS PATIENTS

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Malnutrition, inflammation and atherosclerosis -MIA syndrome-frequently occur together in chronic haemodialysis patients. The aim of our study is to make a comparative investigation cardiovascular risks and malnourished assessment in chronic haemodialysed 65 females (63.4±8.2 years) and 46 male (61.3±7.8 years) by using different methods. Subjective global assessment (SGA) measured moderate malnutrition in 56.01% in females, and in 59.37% of male, severe malnutrition (SGA-C) was in 20.01 vs. 9.38% of pts. With adequate dialysis treatment the serum transferrin levels were <1.8 g/l in 63.72% of women, in 61.76% of men. The haematocrit was <0.31 in 6.89% females and 14.7% male. Pre-albumin concentrations were lower <199 mg/l in 18.97% females, in 29.11% males. The hypoalbuminaemia <38.01 g/l were 15.52% females, 29.41% males. Total cholesterol levels decreased <4.8 mmol/l in 37.93 females, 58.82% male. The HDL-cholesterol concentrations were lower <1.4 mmol/l in 77.9% females and 41.18% male. Hypertriglyceridaemia can be found in 41.38% vs. 41.20% of pts. The LDL/HDL ratio was >3.5 in 73.81% vs. 43.79% of patients. C-reactive protein (CRP) concentrations were higher >8.5 mg/l in 39.66% females, in 50.01% male. The lymphocytes counts were smaller <18% in 29.31% vs 41.18% of women/men. The multi-frequency bioimpedance analysis (inBody3-BIOSPACE) present good correlation with decreased pre-albumin, albumin, transferrin levels, increased CRP and TBW. The higher homocysteine levels (>25 umol/l) were in cerebro- and cardiovascular complications. Low pre-albumin, HDL cholesterol, high LDL, hypertriglyceridaemia, increased CRP concentration, high TBW, LBW, (p<0,01) associated after insufficient and inadequate nourishment in malnutrition with SGA-B and C condition.

A NEW APPROACH TO PATIENT TRANSPORT

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The Clinical Standards Board for Scotland (CSBS) states "Delays for patients attending for dialysis are minimised through reasonable measures taken by the Trust" (CSBS, 2002). Length of dialysis day is very important to patients. Reducing the length of day helps to minimise disruption to daily life caused by a physically demanding and time consuming treatment. Patients in our unit attend for haemodialysis 3 times a week and often travel from distant and remote parts of the county. As such, the 141 patients attending the unit were experiencing problems with both long journey times and long waiting times pre and post treatment. To address these problems, a dedicated renal transport system was developed in liaison with the Scottish Ambulance Service. This has supplied the unit with its own drivers and vehicles. Drivers are trained by the ambulance service and then based at ambulance stations throughout the county. They then collect and take home patients in geographically based "runs". The system has received positive patient evaluation. Improvements to the service were also demonstrated in an audit carried out for the CSBS Peer Review Group visit in July 2002. Within all the criteria for assessment the transport system scored highly. For example, 100% of patients were collected within half an hour of their allocated pick up time (standard target=50%), and 89% of patients commenced dialysis within half an hour of appointment time (standard target=50%).

GLOMERULAR FILTRATION RATE (GFR) MEASUREMENT BASED ON PLASMA INULIN CLEARANCE

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Development of renal dysfunction is a frequent complication and a major morbidity and mortality factor following liver transplantation. Clearance studies requiring exact urine collection are often based due to errors resulting from incomplete urine collection and fluid retention. It is for these reasons that methodological procedures based solely on monitoring the kinetics of appropriate GFR markers in plasma (e.g., radionuclide studies of the kidney) are being increasingly used. We sought to evaluate the relationship between the plasma and renal clearances; rates of inulin using exact urine collection in 75 individuals undergoing orthotopic liver transplantation (OLT). Plasma inulin clearance was calculated using the formula: $D/P_o \times 0.693/t_{1/2}$ where D is the dose of polyfructosan administered; P_o is the plasma level at the time of injection; and $t_{1/2}$ is polyfructosan biological half-life. Polyfructosan levels were determined using anthron method (White & Samson). Statistical evaluation was performed by means of linear regression analysis. A significant linear correlation ($r=0.830$; $p<0.001$) was demonstrated between simultaneously determined plasma C_{in} and renal C_{in} . However, most plasma C_{in} values are below the diagonal line. Judging by the results, plasma C_{in} determination in OLT individuals does allow GFR assessment without the patient having to collect urine. Plasma inulin clearance provides information comparable to that obtained by GFR measurement using radionuclide methods.

SINGLE (SN) AND DOUBLE NEEDLE (DN) HAEMODIALYSIS EFFICIENCY UNDER VARIOUS DIALYSATE FLOWS

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Single needle dialysis offers less than optimal dialysis and is used for a short while when vascular accesses present temporary and reversible puncturing difficulties. We used double pump blood flow (BF) SN system and variable dialysate flows (DF) to ameliorate SN dialysis results and compare them to the gold standard DN technique. Nineteen patients (14 M, 5 F), age 62 (40-90), on haemodialysis since 67 months (8-204), were dialyzed with DN (BF:300 ml/min) or SN double pump system (BF:162.4±21.2 ml/min) on Gambro AK200 module, in one, mid-week, 4 hours, dialysis session, with DF 500 or 800ml/min and other dialysis parameters constant. Clinical changes (weight, blood pressure, heart rate) were recorded. Biochemistry and haematology results, before and after each dialysis session, were also analysed and dialysis adequacy was studied using a Urea Kinetics computer program (HDCN.com: Urea Kinetics Calculator) with rebound urea determinations. Clinical and laboratory results were similar with both vascular access methods and DF except for blood urea nitrogen (BUN) and serum creatinine (dSC) changes. Consequently urea kinetics were also variable according to the access method and DF used:

Table 1
 Values in I, II, III and IV dialysis sessions varied significantly: $P < 0.001$ but not in II vs. IV. Single needle dialysis, using double pump system, independently of the dialysate flow level, results in lower dialysis adequacy and PCRN, compared to double needle conventional dialysis. Higher dialysate flow did not succeed in delivering more dialysis in either vascular access system used.

Table 1

	I DN 500	II SN 500	III DN 800	IV SN 800
dSC mg/dl	5.4±1.2	3.8±0.8	6.4±1.4	3.8±0.
Urea Reduction Rate %	69.6±5.0	52.4±8.5	64.8±5.8	949.7±7.8
KT/V Single Pool	1.45±0.23	1.71±0.36	1.25±0.21	0.84±0.26
KT/V Double Pool	0.92±0.25	1.26±0.33	1.09±0.20	0.74±0.17
KT/V Single Pool	1.45±0.23	1.71±0.36	1.25±0.21	0.84±0.26
KT/V Double Pool	0.92±0.25	1.26±0.33	1.09±0.20	0.74±0.17
PCRN Single Pool	1.27±0.20	1.60±0.34	1.47±0.31	1.14±0.37
PCRN Double Pool	0.81±0.21	1.17±0.31	1.37±0.30	1.05±0.34

DIALOCK SUBCUTANEOUS PORT FOR HAEMODIALYSIS: EFFICACY OF THE PROTOCOLS OF MANAGEMENT IN A SINGLE CENTRE

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Subcutaneous ports (Dialock® ,Biolink Corp, USA), are alternative to tunnelled central venous catheter (CVC) in a critical situations. From February 1st 2000 to August 31st we have evaluated the follow-up protocols of 27 HD patients (13 M, 14 F, median age 65.8 years, dialysis duration 48.6 months [0-269 months]) submitted to Dialock® implantation. In 8 cases the port was the first access, in 10 it replaced a CVC. The site of implantation has been the internal jugular vein (24 right, 3 left). Antithrombotic lock with sodium citrate (3,8%) was adopted. We have optimised the procedures for one/two operators, arranging the material in sterile kits; we have standardized the procedures of evaluation of infections and the antibiotic therapy protocols both in vein and in the catheter locks. We recorded blood flow (QB), arterial (AP) and venous (VP) pressure and calculated the KT/W (Daugirdas), and the recirculation with Glucose Infusion Test (GIT) and with Transonic® .The prescribed QB was attained in 92,7% of the sessions. AP and VP at the prescribed blood flow of 300 ml/min, were -170 and +152 mmHg, respectively, the mean KT/W 1,44 and mean recirculation rate was 1.47% (GIT) and 6.2% (Transonic®). Twelve episodes of bacteraemia in 8 patients (0.81 per1000 catheter days) and 4 of thrombosis (0.27 per1000 catheter days) were recorded. The strict adherence to the protocols of care allowed satisfactory results with the ports, in term of reduction of infections and thrombosis, and of management of complicated vascular situation.

OPTODILUTIONAL EVALUATION OF ACCESS FLOW, COMPARISON WITH OTHER TECHNIQUES

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Aim: QVA is considered the best parameter to assess vascular access quality. . Recently, the new software developed for the blood volume monitoring device Critline III (In-line Diagnostics) has enabled evaluation of QVA. We have compared this optical QVA evaluation with ultrasonic (HDO1, Transonic) and thermodilutional method (BTM, Fresenius).

Material and methods: QVA measurements were performed in HD patients using 4 methods simultaneously: Critline III in recirculation measurement mode (manual QVA calculation from forced recirculation (RX), Critline III in AFB (access blood flow) measurement mode (automated evaluation from UFR-induced haemoconcentration), ultrasonic QVA evaluation (Transonic), and thermodilutional RX measurement with manual QVA calculation. **Results:** With Critline III, QVA evaluation from RX measured in recirculation mode is much faster (comparable to that of the Transonic device and slightly less fast than with BTM) than direct QVA evaluation in the ABF mode. However, reliability of the RX-based approach is worse than of those obtained in the ABF mode (correlation coefficient $r = 0,61$ vs. $0,864$ against BTM results and $r = 0,538$ vs. $0,769$ against the Transonic device). For unclear reasons, RX-based QVA evaluation with Critline III works well for extracorporeal blood flows (QB) around 300 ml/min only. On average, the Critline-based QVA values are about 20% higher than those obtained with the other methods.

Conclusions: Optical QVA evaluation with Critline III device correlates well with results from ultrasonic dilutional and thermodilutional measurement. The RX-based QVA evaluation with Critline III is much faster than the ABF mode but its reliability is worse. Also higher QBs are needed.

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