

ULTRASOUND SCANNING IN DIALYSIS AND PRE DIALYSIS: A WINNING CHOICE

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INTRODUCTION

Ultrasound scan is an important diagnostic device, widely spread among professionals for its non invasiveness, repeatability and manageability. In pre dialysis and dialysis, ultrasound scan has gained popularity also among nurses, which they use it for the evaluation, assessment and management of the fistula arteriovenous (fav). The use of ultrasound techniques in nursing can support professional procedures also in terms of development of specialist expertise.

OBJECTIVE

Establish a pool of competent nurses in the ultrasound pre-dialysis and hemodialysis.

METHODOLOGY

A group work will be created with the purpose to identify the essential tasks needed at the base level of the project. This will be achieved through work experience and literary reviews. The different stages can be summarized in 6 steps with common and specific objectives for the Unit.

Step 1

- Hemodialysis: mapping and evaluation of the FAV;
- Pre hemodialysis: mapping and evaluation to help for the clinical choice;

Step 2

Selection of a pool of hemodialysis nurses according to the skills acquired by ultrasound courses and supervised training with the department specialist physician;

Step 3

Establish of a specific training and implementation of the project to all the pre dialysis nurses;

Step 4

Establish of a computerized archive with all the data;

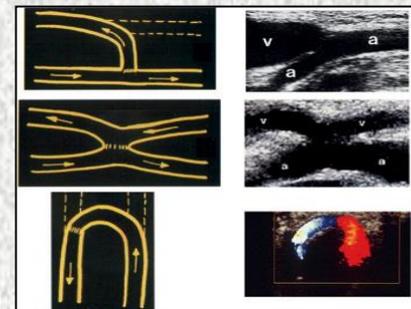
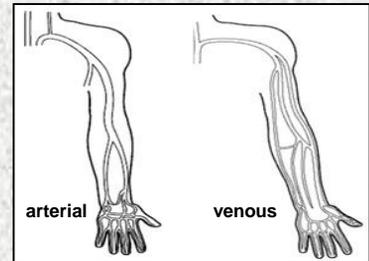
Step 5

Project team, nursing coordinator and specialist doctor collect and analyze all the data;

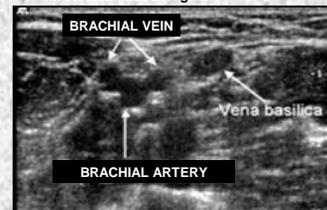
Step 6

Evaluation and discussions in plenary session of the results for project corrections and implementations.

Example schema for mapping preoperative



Types of fistula and its longitudinal ultrasound scans obtained on the anastomotic region.



ANATOMY OF THE ARM

REPORT	
Ultrasound Vascular Access Nursing	
NAME PATIENT _____	
DATE OF BIRTH _____	
INFORMATION ABOUT VASCULAR ACCESS _____	
QUESTION FOR PERFORMANCE ULTRASOUND _____	
PERFORMANCE DATA AND DESCRIPTION OF ULTRASOUND: _____	
INDICATIONS: _____	
NURSE SIGNATURE _____	

OPERATIVE EDUCATION SERVICE	RENEXX	
Division of Nephrology, Dialysis and Transplantation Prof. G. Lamanna	Version 0	
SEGNARE MASSIMILIANO VASCULARE ACCESS NURSE REPORT ULTRASOUND IN PRE DIALISI PER RENEXX EDI 1110	Page: 1/1	
Date of application: _____		
TITOLI	SUMMARY	
1.1 REFERENCE DOCUMENTS: _____		
1.2 DEFINITIONS: _____		
1.3 CONTEXT: _____		
1.4 ATTUALITÀ E SITUAZIONE: _____		
STATE	DATE	SIGNATURE
Prepared		
Checked		
Approved		
Edited		



EXAMPLE DATABASE

Name	Birth	Age	Sex	Self-catheter	Date construction FAV	Site	Distal	Proximal	Veins used for the FAV	Prosthesis	Location	Photo	Notes of dialysis	Years of the FAV	Sites for artery	Sites for vein	FAV capacity	Alert	Complications: aneurysms, infections, thrombosis	Technique: constant site, trans-hub, open leader
Mr. Bisacchi			male	-/female																
Mr. Otelli																				
Mr. Verdi																				

RESULTS

The primary aim of the project is to extend the knowledge, use and skills regarding ultrasound to all nurses in our operating unit of hemodialysis and pre dialysis. Moreover, the study aims to generate a mapping of all the vascular accesses, starting with the identification till the creation and evolution of the same. Also the puncture sites need to be identified and mapped and the eventual changes caused by complications. Data collection will be used to compare the changes over time of the fav and to expand and spread the use of this technology in various areas of nursing.

CONCLUSIONS

In the process of managing a patient, the practice of ultrasound, which is carried out by a specialist nurse, becomes an indispensable praxis. This is evident especially in the field of pre hemodialysis. Ultrasonography is an important and essential device for the professional growth of nurses because it facilitates the good execution of invasive techniques and makes them safer for both the patient and the operator. View current cost containment it can reduce costs through a reduction of the complication often caused by assessments and incorrect maneuvers vascular access.

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