



Peritoneal dialysis in a diabetes patient with severe MRSA septicaemia – A case study

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Introduction

According to scientific literature, there is no consistent evidence which treatment modality is most suitable for an ESRD patient (1,2,3). Therefore, appropriate treatment should be carefully considered on an individual basis. Changing to haemodialysis is very common in septic patients on continuous ambulatory peritoneal dialysis (CAPD) if the patient's condition deteriorates. This decision is usually characterised by concerns regarding inadequate fluid control and complications.

Objectives

To prove the uselessness of a modality change to haemodialysis in case of relative contraindication of CAPD treatment, such as serious prolonged septic condition.

Methods

In our case study, we report an incidence of a 32 years old patient with severe septicaemia as a consequence of a lower limb MRSA infection, focusing on problems and tasks regarding continuation of CAPD treatment.

Medical History

32 years old female
Type 1 diabetes (1996)
Uncomplicated child-birth (2006)
CKD-3b (October 2013)
Complicated UTI (January 2014)
Chronic colitis, helminthiasis (March 2014)
Hypertensive crisis, hypertension (July 2014)
Tenckhoff catheter insertion, start of CAPD (September 2014)



Figure 1. Right limb after recovery

		06.12.2016	18.11.2016	03.10.2016	06.09.2016	01.08.2016	29.07.2016	08.06.2016	11.05.2016	13.04.2016	08.03.2016	09.02.2016	04.01.2016
CNI	mmol	17.70	17.70	13.90	16.30	10.10	10.50	20.60	15.50	17.60	21.50	16.60	14.80
Potassium	mmol	4.90	4.70		5.10	3.80	3.60	4.40	4.00	4.20	3.40	4.00	5.40
Bicarbonate	mmol				22.00		21.50		18.00				20.10
Ca ²⁺ product	(mmol) ²			2.24	2.33		4.25		3.71				4.14
Phosphate	mmol			1.07	1.07		2.08		1.75				2.08
PTH (Si)	pmol						26.00		28.82				
Corrected PTH (si)	pmol						20.80		23.06				
Ce (total)	mmol	1.91	1.94	2.10	2.19	2.03	2.05		2.13		1.62		2.02
25-hydroxycholecalciferol	nmol				19.96				7.50				
Haematocrit	%	27.000	30.000	33.000	35.000	36.000	32.000	21.000	28.000	18.000	18.000	22.000	28.000
Haemoglobin	g/dl	8.40	9.30	10.70	11.20	11.30	9.70	6.60	8.80	5.60	5.90	7.30	9.10
Iron	µmol				7.300		10.100		6.100				3.300
Transferrin	g/L				1.40		0.90		1.20				2.10
Transferrin saturation	%				21.00		44.00		20.00				6.00
Total protein	g/L		63.90	61.00		53.60		67.00		34.70			65.00
Albumin	g/L		23.90	23.30		19.90		29.55					31.00
Albumin (%)	%		39.18	43.47		36.80		43.95					47.69
CRP (C Reactive Protein)	mg/L	69.400		52.500	33.070	50.100	39.900	78.300	33.530				42.820
Procalcitonin	ng/ml									0.70	4.61	6.44	
Creatinine	µmol	765.00	689.00	659.00	684.00	626.00	642.00	690.00	585.00		496.00	595.00	703.00

Table 1. Lab results in hospital

Case Description

The patient was hospitalised with SSTI of lower limb to the Internal Medicine Department (July 2015). Surgical treatment of complicated erysipelas (January 2016). Repeated hospital admissions with sole and toe phlegmon (February 2016). ICU admission for intensive postoperative follow-up after extensive surgical debridement of the right lower limb (March 2016). Polytransfusion after haemorrhagic oesophagitis (April 2016). Hospital readmission with CDI (July 2016). Urgent care in the Emergency Department thereafter outpatient treatment of PD-related peritonitis (July 2016).

Results

In this case, it was not necessary to interrupt CAPD as a part of complex causal and supportive therapy. We achieved a satisfactory fluid and metabolic control by continuing peritoneal dialysis and did not observe any complications related to the peritoneal dialysis modality. The patient has recovered from her septic illness.

Conclusion

Although general findings cannot be concluded due to the unique nature of the case, we can claim that CAPD treatment in septic patients is not necessarily unsuccessful even if predisposing factors (e.g. diabetes) are present. In this population, continuation of CAPD can be a reasonable alternative to a modality change in case of a previously adequate peritoneal function and fluid balance.

References

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