



THE ROLE OF A NURSE IN THE TREATMENT OF ACUTE RENAL FAILURE

Sabina Eberl, Zvezdana Kupnik, Violeta Balevska, Robert Ekart
Clinic for Internal Medicine, Department of Dialysis, University Medical Centre Maribor, Slovenia

BACKGROUND

Acute kidney failure (AKF) is defined as increased serum concentration of urea by 3.3-6.6 mmol/l/24h, in catabolic conditions by 33 mmol/l/day and as an increase in serum creatinine by 44-98 µmol/l/day. The acronym RIFLE has been used since 2004 and stands for Risk, Injury, Failure, Loss and End stage kidney disease. AKF is a significant predictor of worse outcome in patients treated for their underlying disease. It is also associated with increased morbidity and mortality. It poses an increased long-term risk for the development of chronic renal failure (CRF), cardiovascular diseases and increased mortality, relating hereto. Depending on its cause, AKF can be divided into three categories: PRE-RENAL AKF is due to reduced blood flow to the kidneys and occurs in 55-60%; RENAL (INTRINSIC) AKF is caused by damage to the kidney parenchyma and occurs in 35-40%; POST-RENAL AKF follows obstruction of the urinary collecting system and occurs in less than 5%. AKF might require renal replacement therapy. The rapid development of science, technology, and nursing care in the field of nephrology, dialysis, and transplantation requires educated nursing staff.

PATIENTS AND METHODS

Medical records of patients with AKF, who underwent acute dialysis during the period from January 2009 to December 2013 at the Department of Dialysis, University Medical Centre Maribor, were retrospectively reviewed.

RESULTS

Dialysis catheter (90.36 %) was the most common approach used, which indicates a sudden renal failure. On average, male patients suffered more frequently than female patients (64.45%). In most cases, the standard bicarbonate haemodialysis (87.4%) and the low molecular heparin (88.5%) were administered. During this period, the mortality of dialysed patients was 54.22%. Globally, this indicates a trend towards a decreasing percentage. The highest mortality rate was observed in 2010.

Year	2009	2009	2011	2012	2013	2009-2013
No. of patients	40	28	40	42	14	164
Mean age of patients (years)	68	71	70	68	68	67.2
Male	25	18	25	28	9	105
Female	15	9	15	14	5	58
No. of acute intermittent dialysis/year	141	73	104	183	48	465
Mortality	13 (32.5%)	19 (67.9%)	13 (32.5%)	19 (45.2%)	6 (42.9%)	70 (42.1%)

Table 1: Acute intermittent dialysis, Department of Dialysis

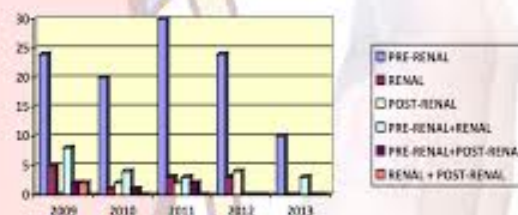


Diagram: Causes of acute kidney failure during 2009-2013 in Department of dialysis

Pre-renal condition (65.0%) is the most common cause for AKF in patients, who required acute dialysis.

CONCLUSION

Good teamwork and well-organized cooperation of all medical professionals involved are crucial for the treatment to be successful. In our department, nurses contribute to an efficient and successfully performed dialysis procedure. Department of Dialysis is a part of the Clinic for Internal Medicine, which is a teaching institution. Nurses should be encouraged and enabled to receive education. We work as a team. This enables a positive attitude towards the dialysis treatment and nursing care in the field of dialysis. As a part of the multidisciplinary team of the Department of Dialysis of the UMC Maribor, nurses use systematic problem solving in the course of treatment, introduce new approaches, self-directed learning and successful education of the nursing staff. Nurses take part in research in the field of dialysis treatment and nephrology nursing care. Furthermore, they regularly evaluate their knowledge, encourage organisational curiosity and create an environment to promote acceptance and open-mindedness. To ensure the safety of the patients and a better professional work, the nurses at the Department of Dialysis stay abreast with the novelties regarding dialysis treatment. We share our knowledge with other departments of the UMC Maribor.

In our perspective, the future of the dialysis treatment and the nephrology nursing care lies in the continued scientific education, organisation and systemisation of already acquired knowledge either practical or scientific.

We aim at improving the treatment outcome of AKF, as it accounts for 50-80% of mortality.

CORRESPONDING AUTHOR:

Sabina Eberl, Registered Nurse | Clinic for Internal Medicine, Department of Dialysis, Ljubljanska 5, University Medical Centre Maribor, Slovenia | e-mail: eberlsabina06@gmail.com

44th EDTNA/SCCA International Conference, September 26-29, 2015 - Dresden, Germany