

73. **INDICATIONS AND COMPLICATIONS OF EMERGENCY HEMODIALYSIS AMONG PATIENTS WITH ACUTE KIDNEY INJURY ADMITTED IN HEMODIALYSIS CENTER AT BAHRI TEACHING HOSPITAL, KHARTOUM STATE, SUDAN 2021 - 2022**

Wamda Alemam¹.

¹Sixth (final) -year Medical Student. University of Khartoum Faculty of Medicine, Bahri Khartoum state, Sudan.

BACKGROUND: AKI is defined as abrupt decline in renal functions either due to structural damage or loss of function, associated with poor clinical outcomes for hospitalized patients. In the context of Sudan, highlighting the most common indications and complications that may occur during emergency hemodialysis and describing their presentation, may offer measures to minimize them by provide specific interventions to prevent the consequences when such emergencies arise. **AIMS:** To study the indications, and complications of emergency haemodialysis among patients admitted in haemodialysis center at Bahry teaching hospital, Khartoum state, Sudan. The study also aimed to describes the pattern of presentation in term of symptoms and signs reported among patients. **METHODS:** It's an observational descriptive cross sectional, hospital based study that was conducted at the renal haemodialysis center within the period from September 2021 to October 2022 and covered 149 patients with AKI who underwent emergency hemodialysis, this sample size was calculated using Epi calculator and then adjusted using the hospital records that described the frequency of admission of patients with AKI in the preceding 6 months and excluded obstetric AKI. Data was collected, prepared, entered and analyzed using SPSS version 25.0 in term of descriptive statistics and Bi-variable analysis to determine the associations between some relevant factors (demographic characteristics, indications and complications) with the occurrence of complications using Chi square test (for categorical variables) and t-test (quantitative variables). **RESULTS:** This study covered 149 participants. Nearly half of them 40.9% of the study participants were in the age group 30-60 years with male: female ratio of 2.3:1 and 44 % of the participants had co morbid illnesses with diabetes, hypertension and liver disease being the most common. Regarding the history of renal disease only 4.7 % had previous history and 10% had family history of renal disease. The most common indication for emergency haemodialysis was uremia 44%, followed by fluid overload that cannot be managed by diuretics 30%, worsening severe metabolic acidosis 10% and refractory hyperkalemia 4.7%. Complications on the other hand occurred among 20% of the patients such as hypotension 8.7%, and hypoglycaemia 8.7%. There was significant association between certain social habits like smoking, middle age group as well as past history of renal disease with the development of complications (p value = 0.01, 0.005 and 0.05 respectively). **CONCLUSION:** nearly half of the study participants were in the age group 30-60 years old with male: female ratio of 2.3:1. The most common indication for emergency haemodialysis was uremic gastropathy followed by Volume overload. Complications occurred among 20% of the participants such as hypotension and hypoglycaemia. **Recommendation,** Training of health care provider on how to deal with patient with AKI and when to include nephrologist in management to avoid dialysis and training of dialysis staff on early recognition and management of complication.

Table. Indications of Emergency Hemodialysis.

Indications of emergency Hemodialysis	Frequency	Percentage%
Volume overload	45	30.20%
refractory Hyperkalemia	7	4.70%
Uremic gastropathy	66	44.30%
Worsening severe metabolic acidosis	15	10.10%
Pericarditis	1	0.70%
Encephalopathy	15	10.10%
Total	149	100

Key words: Humans; Male; Female; Adult; Middle Aged; Renal Dialysis; Nephrologists; Diuretics; Cross Sectional Studies; Emergencies; Sudan; Uremia-Hypotension; Water-Electrolyte Imbalance; Hypoglycemia; Acute Kidney Injury (Source: MeSH-NLM).