

Pediatric Acute Renal Failure in Chad: Epidemiological, Clinical and Evolutionary Aspects

Abstract

Introduction:

Acute kidney injury (AKI) is a clinical syndrome characterized by a sudden and potentially reversible reduction in kidney function. It is an important cause of morbidity and mortality in sub-Saharan Africa. Our objective was to study the epidemiological, clinical, paraclinical, therapeutic and evolutionary aspects of acute renal failure in children at the Renaissance University Hospital Center and Mother and Child University Hospital in N'Djamena, Chad.

Methodology:

This was a descriptive and analytical cross-sectional study for six months from March to August 2020. All children aged 1-year to 15 years that were hospitalized in the emergency ward with acute renal failure defined by the KDIGO 2012 criteria were included in the study. The data were analyzed by Excel 2019 and SPSS 18.0 with significance ($p < 0.05$).

Results:

Thirty children were included in the study with a hospital prevalence of 0.56%. The mean age was 8.33 years with a sex ratio of 3.28. The average consultation time was 10.1 days. Vomiting was the main reason for consultation (46.7%). About 27% of patients had oligoanuria. There were 86% of the cases that were anemic, half of which were severe. Mean serum creatinine was 434.02 $\mu\text{mol/l}$ and the mean urea level was 26.86 mmol/l . Severe malaria was the main cause of AKI (33.3%). All patients suffering from malaria received antimalarials based on artemisinin derivatives. Intermittent hemodialysis was indicated in 22 patients (73.4%). The evolution was marked by a total recovery of renal function in 20 patients, 8 deaths and 2 transitions to chronic kidney disease. Deaths were statistically related to AKI severity, age range 1-5 years, femoral catheters and infections ($p < 0.0000$).

Conclusion: Acute kidney injury is an uncommon pathology in pediatrics and in Chad. It is often linked to severe malaria and has a high mortality rate.

Biography

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