



SHORT TERM OUTCOMES OF CHILDREN WITH ACUTE KIDNEY INJURY TREATED WITH HEMODIALYSIS IN A TERTIARY PEDIATRIC HOSPITAL: A SIX-YEAR REVIEW

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BACKGROUND

Acute Kidney Injury (AKI) is a well-recognized complication in hospitalized children. Its clinical implications include a wide range of short-term to long-term complications of varying degrees of severity ranging from death or may extend well beyond the initial inciting event, and eventually be a risk factor for the development of Chronic Kidney Disease (CKD) in adulthood.

The Philippine Children's Medical Center Hemodialysis Unit, established in 2017 as the first pediatric-dedicated dialysis unit in the country, had been treating chronic and acute cases since 2018.

To date, there are no known studies profiling patients who develop pediatric AKI in the country.

OBJECTIVES

This paper aimed to describe the clinical profile and short-term clinical outcomes of children with Acute Kidney Injury (AKI) requiring hemodialysis in a tertiary pediatric hospital.

METHODS

The study was a single-center retrospective cohort of patients admitted at a tertiary children's hospital who underwent hemodialysis treatment for AKI between July 2018 and July 2023.

Medical charts of patients who fulfilled the criteria of AKI and who underwent hemodialysis were reviewed for demographics, clinical profile and outcomes - a. mortality, b. AKI - recovered, c. Acute Kidney Disease, d. Chronic Kidney Disease.

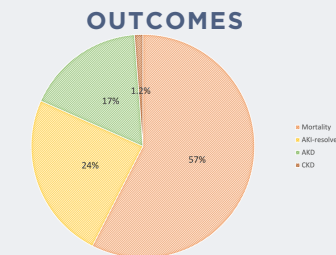
RESULTS

A total of 129 patients fulfilled the inclusion criteria and were included in the study. The average age of patients was 10y. There was an almost equal distribution between males and females. Patients weighed an average of 35kg, with an average BSA of 1.1.

The top 3 underlying disease upon hemodialysis treatment for AKI were: 1. AKI/MODS sec to Severe Dengue, 2. AKI/MODS sec Severe Sepsis, 3. Rapidly Progressive Glomerulonephritis (excluding SLE).

Of those with co-morbidities (N=67), the top 2 conditions were solid tumors (22%) and systemic lupus Erythematosus (22%) followed by leukemia (10%).

The most common indication for hemodialysis was uremia (53%) followed by oliguria (43%) and fluid overload (22%).



CONCLUSION

The cases of AKI and indications for hemodialysis were comparable to previous international studies. The PCMC HDU has been able to deliver acute treatments to a wide range of pediatric age groups using pediatric-specific techniques with pediatric-trained staff and supplies. Mortality rate was higher compared to international studies, although the paper did not discriminate from mortalities caused by non-renal factors.