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CLINICAL PROFILE AND OUTCOME OF CHILDREN WHO RECEIVED RENAL REPLACEMENT THERAPY FOR ACUTE KIDNEY INJURY IN TIKUR ANBESSA SPECIALIZED HOSPITAL; AN ISN/ SRC TRIO EXPERIENCE.

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Introduction: Acute kidney injury (AKI) requiring Renal Replacement Therapy (RRT) is associated with high mortality. The study assessed the impact of the introduction of RRT on outcomes of patients with AKI in Pediatric Nephrology unit in Tikur Anbessa Specialized Hospital (TASH) in Addis Ababa, Ethiopia. We provided acute Peritoneal Dialysis and acute intermittent Hemodialysis with support from the ISN SRC trio program for few selected cases due to lack of resources.

Methods: A single center retrospective study that evaluated the clinical profile and survival outcomes of patients with AKI requiring Intermittent Hemodialysis and Acute Peritoneal Dialysis (IHD/ APD) at a tertiary hospital in Addis Ababa, Ethiopia. Data was collected on patients who received RRT for AKI from July 2016 to October 2018. Patient demographics, comorbidities, clinical presentation, laboratory tests, and mortality were reviewed and analyzed.

Results: There were 35 children in this cohort; median age was 9 years (IQR 4 months – 15 years). Females comprised 54.3% of the cohort. Infectious diseases including Acute Gastroenteritis, Pneumonia, and severe Septis (720%) and Acute Glomerulonephritis (AGN) 15 (54.28%) were the most frequent commodities. Oligo-anuria with pulmonary edema (91.4%) was the top indication for RRT. Overall mortality was 37.14%. Underlying severe sepsis and pulmonary edema in AGN patients were the most common causes of death. Twenty one (60%) of children had partial renal recovery on discharge. One child went home against medical advice. Eleven children received acute IHD in the adult Unit. Of the children who received APD, there was a 37.5% complication. Two children had catheter obstruction, 5 leaks from the insertion site and 2 children had peritonitis. We used a rigid catheters inserted at bedside with improvised fluids according to the ISPD guidelines using Ringer Lactate and Dextrose solutions.

Conclusions: The availability of acute RRT in Pediatric Nephrology unit in TASH has resulted in improved patient survival. Early detection of AKI and prompt protocol based management are essential in reducing the morbidity and mortality related to AKI. We recommend vigorous resuscitation and management of sepsis to save lives. The ISN SRC program helped our unit in providing physicians’ training and equipment to deliver a standardized health care service to children with AKI in our institution.

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RENAL BIOPSY ADEQUACY AND COMPLICATIONS IN CHILDREN

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Introduction: Renal biopsy is commonly used in the diagnosis of kidney diseases. Increasingly in paediatric practice, biopsies are performed under general anaesthetic by interventional radiologists, who perform their own ultrasound compared to nephrologists who use ultrasonography to guide biopsy. This study compared radiologists and nephrologists regarding biopsy adequacy and complication rates.

Methods: We examined consecutive kidney biopsies performed between January 2008 and December 2017 and probed the electronic medical records of patients for data regarding complications. In native biopsies, successful processing for light microscopy, immunofluorescence, and electron microscopy were used as proxy for specimen adequacy. In transplant biopsies, adequate specimens contained at least 10 glomeruli and 2 arteries, based on the Banff criteria. Data were analysed using Mann-Whitney U test, Pearson’s chi-squared test, and Fisher’s exact test in SPSS.

Results: Interventional radiologists performed 112 of the 355 biopsies obtained. Interventional radiologists made more passes (median number 3 vs 2, p < 0.01) and obtained more renal cores (median number 3 vs 2, p < 0.01). They obtained more total glomeruli (median number 32 vs 15, p < 0.01) and more glomeruli per core (median number 12.0 vs 7.0, p < 0.01). No differences in specimen adequacy of native renal biopsies were observed between the two groups, but interventional radiologists obtained more adequate transplant biopsy specimens (95.0% vs 51.4%, p < 0.01). There were no significant differences in complications, including de novo haematuria, pain requiring analgesia, unplanned overnight stay, transfusion requirement, biopsy-related infections, or AV fistula formation between the two groups. A statistically lower rate