Abstract:

**Introduction:** Acute kidney injury is a common condition seen in critically ill children in PICU. Though several defining criteria have been developed, the best definition for clinical use is yet to be identified.

**Objective:** To define the best criteria to diagnose AKI and to study the incidence of risk factors and outcome of AKI in critically ill children.

**Materials and Methods:** It was a prospective study done in PICU from February to July 2017. Out of 205 critically ill children, 145 fulfilled the criteria. AKI was diagnosed using Serum Creatinine and Urine output, according to three different criteria. Data obtained was statistically analysed.

**Result:** Incidence of AKI was 33.1%. Out of 145 children, 48 were diagnosed to have AKI based on pRIFLE/AKI/N KDIGO. Using serum creatinine many more children were diagnosed as AKI compared to urine output. M:F ratio was 1.3:1. The commonest cause was infection (20.68%). Followed by neurological (20.1%) and hematological (15.6%) causes. Sepsis was present in 23.3% of children. The risk factors were nephrotoxic drugs, coagulopathy and shock (p<0.05). Use of ionotropes, mechanical ventilator (p<0.001) were significantly related to poor outcome. Mortality was 29.1%. On follow up 2 (4.16%) had established renal disease.

**Conclusion**

Inter definition agreement between the three definition were good. pRIFLE identified more children with AKI (p < 0.023) and was also the best predictor of mortality in stage 3. The three criteria compared equally well in defining Acute kidney Injury.

**Key words:** Acute kidney Injury, pRIFLE, AKIN, KDIGO, predictive ability of mortality