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**THE PATTERN OF USE OF DRUGS WITH NEPHROTOXIC  
POTENTIAL AND ITS CORRELATION WITH ACUTE KIDNEY  
INJURY IN PATIENTS WITH SEPSIS**

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## **ABSTRACT**

**TITLE:** The pattern of use of drugs with nephrotoxic potential and its correlation with acute kidney injury in patients with sepsis

### **BACKGROUND :**

Nephrotoxicity is one of the most common causes of acute kidney injury in those with sepsis. This is attributed to the frequent usage of medications that have a potential to cause renal damage. Acute kidney injury that occurs as a result of use of medications that have a nephrotoxic potential is seen in 20% of critically ill patients.

**AIMS:** The present study was done to study the pattern of prescription of drugs with nephrotoxic potential in patients with sepsis and to correlate that pattern with occurrence of acute kidney injury in those patients.

### **MATERIALS AND METHODS:**

**TYPE OF STUDY:-**Prospective hospital based cross sectional study

Critically ill patients admitted to the MICU were screened for the presence of sepsis and those fulfilling the selection criteria were briefed about the nature of the study. After obtaining the data was collected as per a pre designed proforma and then analyzed with SPSS version 23 and the data was represented in bar diagrams and pie charts .

**RESULTS:-** In the study .37.50% were females and 62.50% were males , there was a significant difference in the incidence of acute kidney injury in sepsis , males were more prone and this was statistically significant  $p= 0,002$  ., there was a significant difference in the levels of urea and creatinine in the different groups we noted that there was a declining trend in those whom improved as compared to all the other groups that showed either no change or minor decline. the difference

overall was significant  $p < 0.05$ . The rate of development of acute kidney injury within 48 hours was 85.19% , 67.27% , 81.40% and 66.67% in the DAMA , expired, improved and the unchanged groups respectively.

As per the final outcome; 42.97% expired , 36.72% improved 2.34% were unchanged and 17.97% were discharged against medical advice .we noted that the odds of developing renal dysfunction was higher when the higher antibiotics like colistin , tigecycline were used , which was a bit lesser with meropenem as compared to piperacillin tazobactam . the fluroquinolones and the antivirals also contributed to development of renal failure , it was least with the cephalosporin group of drugs

### **CONCLUSION:**

In the study we conclude that

Those who have renal dysfunction at admission have a higher incidence of mortality .antibiotics should not be withheld because of their nephrotoxic potential because they have a greater benefit ratio than the risks associated with their use.

**KEYWORDS** : acute kidney injury, sepsis , drugs with nephrotoxic potential, drug induced AKI.