

Sepsis-Septic Shock-Acute Kidney Injury Sequence: The Most Important Complication of Steroid Responsive Nephrotic Syndrome

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Abstract

Sepsis is a well-recognized complication of nephrotic syndrome. Systemic inflammatory response syndrome (SIRS) insult in the nephrotic background initiates interplay between inflammation and oxidative stress, leading to septic acute kidney injury (SAKI). Thus, the sepsis-septic shock-AKI sequence ie SAKI develops as a complication of nephrotic syndrome. Data on this subject is lacking. The present study is conducted to know the prevalence, clinical profile, complications and outcomes of this sequence in steroid responsive nephrotic syndrome.

It was an observational cross-sectional study conducted at Dr B C Roy PGIPS, Kolkata, India. Consecutively hospitalised children with steroid responsive nephrotic syndrome below 12 years were included after exclusion of pre-existing chronic kidney disease. Sepsis & septic shock were identified by Sepsis-3 criteria. Outcomes were development of AKI (identified by KDIGO), morbidity and mortality.

Prevalence of sepsis-septic shock-AKI sequence in steroid responsive nephrotic syndrome was quite high. Sepsis-3 score correlated with severity of AKI staging. SAKI was associated with increased length of hospital stay, increased frequency of inotropes & ICU requirement and increased mortality. Thus, sepsis-

septic shock-AKI sequence is the most important complication of steroid responsive nephrotic syndrome. Published data on septic AKI in nephrotic syndrome is very scanty

Biography

Sanat K Ghosh is a professor of pediatrics working as a clinical pediatrician and nephrologist for more than 20 years at Dr B C Roy Post Graduate Institute of Pediatric Sciences, Kolkata, India which is among the few big pediatric hospitals in India. Complications of nephrotic syndrome, particularly, sepsis induced AKI is one of his fields of special interest. Debanjan Sinha is a post graduate trainee of pediatrics at Dr B C Roy PGIPS, Kolkata. He has the experience of working in a number of research projects. Saptarshi Ghosh is a final year MBBS student at Medical College Kolkata. He also has the experience of working in other research projects including a project of Indian Council of Medical Research (ICMR).