

البحث الثالث:

عنوان البحث باللغة الانجليزية:

Incidence and risk factors of urinary tract infection in neonatal sepsis

Abstract:

Background: Neonates with sepsis may have concurrent urinary tract infection (UTI), which may be asymptomatic or have nonspecific symptoms. Failure to diagnose UTI, resulting in a delay of appropriate therapy, has been reported to cause renal scarring, hypertension, and kidney failure among infants. This study aimed to determine the contribution of UTI to neonatal sepsis and to assess different risk factors that could be associated with UTI. This cross-sectional study was conducted at the Neonatal Intensive Care Unit (NICU) of Fayoum University Hospital, Fayoum, Egypt, between March 2018 and January 2019. Neonates of both genders from birth to the 28th day of life with clinical features of either early- or late-onset sepsis (during or after the first 3 days of life, respectively) were enrolled in this study. All neonates were subjected to complete history taking from the parents, full clinical examination, and laboratory investigations including complete blood count, C-reactive protein, blood culture, and urine culture.

Results: The current study included 100 neonates admitted to the NICU with clinical and laboratory features of sepsis. Positive blood culture (proven sepsis) was detected in 60%, and the proportion of positive urine culture (UTI) in the entire study group was 11%. The incidence of UTI was 11.7% in proven sepsis compared to 10% in suspected sepsis, and it was 16.36% in late-onset sepsis (LOS) versus 4.44% in early-onset sepsis (EOS). There was a statistically significant association between poor feeding and feeding intolerance and positive urine culture (UTI). Leukopenia and expert panel criteria score showed high sensitivity (81.80% and 90.90%, respectively) but low specificity for the diagnosis of UTI.

Conclusions: Gram-negative bacteria have been highly suspected in cases of neonatal sepsis. Poor feeding and feeding intolerance have association with positive urine culture. Finally, urine culture for sepsis was recommended especially in the late type.

Keywords: Neonatal sepsis, Urinary tract infection, Expert panel criteria score, Urine culture, Blood culture