SUMMARY

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Neonatal sepsis is still a major and frequent cause of morbidity and mortality. Preterm infants are at more risk as they are considered immunocompromised host with incomplete development of multiple components of immune system.

Antioxidants; vitamin A, E and C have been reported to modulate several function of immune system.

This work aimed at identifying the role of antioxidants in modulating sepsis among preterm infants.

This study was carried out on 80 preterm infants admitted to Benha University Hospital. These infants were proved to be sepsis free. They were divided into two equal groups. Group I infants were supplied by vitamins A, E and C while those of group II were not.

The two groups were followed up for development of sepsis, which diagnosed by :

Clinical examination.

Laboratory investigations; including:-

Complete blood picture

C- Reactive protein.

Blood culture.

Also serum level of TNF α at birth, at time of sepsis and at discharge was done to evaluate the effect of antioxidant on TNF α serum level.

In this study we found that, there was a lower rate of sepsis among group I than those of group II (45%) and (30%) respectively.

Group I had a low titre of CRP and HSS than those of group II.

The most common organism isolated by blood culture of septicemic infants of both groups was E.coli (50%) and (66.66%) respectively.

The mean time of improvement was short in group I than those of group II (12) and (16) days respectively.

There was a lower serum level of TNF α among septicemic infants in group I compared to those of group II (154) and (248.2) pg/ml respectively.

Group I was found to have a lower mortality rate than those of group II (33.33%) and (61.1%) respectively.