SUMMARY

Neonatal sepsis remains a major clinical problem in neonatology with high morbidity and mortality rates.

Diagnosis of neonatal sepsis is difficult because clinical presentations are often non specific, bacterial cultures are time cosuming and other laboratory tests lack sensitivity and specificity.

This study was conducted in order to evaluate the diagnostic value of the combination of hematological markers and haptoglobin in early diagnosis of neonatal sepsis.

The study was carried out on Thirty septic neonates with clinical sign and symptom of septicemia (as poor feeding, lethargy, not doing well, temperature instability, gastrointestinal, respiratory and cardiac symptoms that may be associated with sepsis) and/or laboratory evidences suggesting sepsis. In addition Ten healthy neonates of comparable age and sex were included as control group taken randomly from the follow up clinic.

All the studied neonates were subjected to the following :

1. History taking (perinatal)
2. Clinical examination
3. Laboratory investigations including:

1. Hematological marker
2. CRP assessment
3. Haptoglobin assessment

Our results showed that:

1. The mean of gestional age was 35.87±2.32 and 38.00±2.00 for cases and controls respectively. There was statistically significnat difference between the two studied gorups regarding age($P < 0.5$).

1. There were statistically signficnat difference between cases and controls regarding weight ($P < 0.5$).

2. There were no statistically significnat difference between cases and controls regarding sex ($P > 0.5$) .

3. There were no statistically significnat difference between cases and controls regarding mode of delivery ($P > 0.5$) .

4. Half of septic neonates patients have poor feeding (50%), 43.3% hypothermia, 33.3% bradycardia, 26.7% jaundice, 26.7% poor reflexes.

5. There were no statistically significnat difference between cases and controls regarding WBCs and neutrophils ($P > 0.5$).

6 The I/T ratio for cases was statistically higher than control gorup (P < 0.5).

7 Positive CRP was found in 100% of cases and non of the controls.

8 The mean of haptoglobin was 226.5±93.36 and 117.0±49.26 for cases and control groups respectively. Cases group was statistically significantly higher in mean haptoglobin than controls (P < 0.5).

9 Haptoglobin showed sensitivity of 76.7% , specificity of 70% , positive predictive value of 88.4% and negative predictive value of 50%.

10 ROC curve shows that Haptoglobin can differentiate septic newborns at cut off value of 204 mg/dl with specificity 70% and sensitivity 76.7 %.