

Chapter Four

Discussion

Severe neonatal infection is one of the most significant causes of pediatric mortality, resulting in more than 500,000 deaths each year (Black *et al.*, 2010). Ninety- nine percent of these deaths occur in low resource settings (Thaver and Zaidi, 2009). Identifying neonates with severe infections is difficult in high resource settings, and limited laboratory capability in low resource .

Settings make diagnosis even more challenging. Clinical criteria for the diagnosis of neonatal sepsis have been developed and are included in the WHO Integrated Management of Childhood Illness (IMCI) program .

The study showed that 100 babies had been diagnosed with sepsis , majority of the cases birth weight were between a range of 2000- 3500 gm and all of them were full term babies .

It was found that 11% of the mothers had PROM > 24 h and there was no significant relationship between PROM and neonatal sepsis , and this agrees with the study done by Kheir and Khair ,(2014) in Soba Hospital ,Sudan, and they suggested that PROM had no significant association with neonatal sepsis .

Fifty eight (58%) patients out of all septic patients had a maternal history of urinary tract infection (UTI). There was significant association between history of (UTI) with increased TWBCs count . This agrees with Bhutta and Yusuf,1997 in Pakistan, who on analysis of maternal risk factors revealed a significant association between maternal urinary tract infection (UTI), maternal pyrexia, vaginal discharge with sepsis , and disagree with Kheir and Khair (2014).

Kheir and Khair, (2014) didn't observe any relationship between neonatal sepsis and route of delivery which accords with the present study.

This study shows that a significant increase in TWBCs in case than the control, this result agree with Farhat *et al.*,(2014) who found an increased white blood cells abnormalities and decrease TWBCs than the normal rage.

Differential neutrophil count (DNC) also showed a numerical increase in case which is on line with Edward *et al* (2015) who reported an increase in band count (BC)and neutrophil (NC).

Platelets count showed a significant decrease in case septic neonates , this result agrees with a study done by Sartajet *al*,(2015) Their results showed thrombocytopenia.

No abnormalities were detected in hemoglobin level ,hematocrit. red blood cells count or indices in the case group of the study. This disagree with Farhatet *al* ,(2014) who found changes in hemoglobin level.

Conclusion

- The majority of neonates diagnosed with early sepsis were females (62%) .
- Fifty eight percent of the mothers had a history of UTI , (40%) had a history of miscarriage, (22%) were delivered by caesarean section and only eleven (11%) of the mothers had a history of prolonged membrane rupture > 24 hours.
- Most of the babies with early neonatal sepsis showed a significant increase in TWBC's and differential neutrophil count (DNC) .
- Early neonate sepsis was manifested with thrombocytopenia .
- The values of hemoglobin level ,hematocrit. red blood cells count and red blood cells indices were not affected by neonate sepsis .

Recommendations

- 1-** A detailed assessment of the mothers and their babies will help defining and evaluating newborns at high risk for sepsis. This may decrease neonatal morbidity and mortality.
- 2-** More studies should be performed to evaluate the sensitivity and specificity of complete blood count as a diagnostic test for neonatal sepsis.
- 3-** A complete sepsis workup in a neonate should be done by obtaining a complete white blood cell count with differential, a single blood culture which is the gold standard test, urine cultures, and a lumbar puncture for cell count and culture to confirm the diagnosis of early neonatal sepsis.