SUMMARY AND CONCLUSOIN

Neonatal sepsis remains a major clinical problem in neonatology, with high morbidity and mortality rates despite the progress in neonatal intensive care and antibiotics. The host defense against infections is immature in the newborn infant, and this makes the neonate more susceptible to intensive infection.

The diagnosis of neonatal sepsis begins with clinical suspicion. The challenge for the neonatal practitioner is to decide which babies need empirical antibiotic therapy but this causes antibiotic overuse and nosocomial infections because of unnecessary hospitalization. Unfortunately there is no single diagnostic test, which can reliably diagnose sepsis in the newborn, therefore many diagnostic tests are utilized to diagnose or confirm sepsis.

This study was conducted in order to evaluate the diagnostic value of CRP and Alpha (1) acid glycoprotein(α1AGP) in the early diagnosis of neonatal sepsis.

This study was conducted on 40 neonates presenting with symptoms and signs suggesting neonatal sepsis ,all were blood culture proved sepsis, admitted to Neonatal Intensive Care Benha Hospital for Children. In addition, 20 healthy neonates of comparable age and sex were included as control group taken randomly from the follow up clinic. With the help of clinical pathology department,Faculty of medicine, Benha University.

All the study population were subjected to the following:
　1.History taking.

2.Clinical examination.

3. Laboratory Investigations including:

- Complete blood count.

- Blood cultures for isolation of the causative organism and its identification.

- Quantitative measurement of CRP.

- Quantitative measurement of Alpha (1) acid glycoprotein(α1AGP) by immunoturbidimetry.

Weak suckling, weak Moro, lethargy and respiratory distress were the commonest presentation of sepsis in our study followed by GIT manifestations and convulsions, while sclerema and bleeding tendency were the least presentation of sepsis.

Our study reveals no significant difference regarding TLC and platelet between patients and control groups.

On the other hand, highly significant increase regarding I/T ratio was observed in the patients group when compared with that of the controls.

A highly statistically significant decrease regarding Hb was observed in the patients group when compared with that of the control.

Results of blood cultures in the septic neonates showed that 40% were caused by *Staph.* 25% were caused by *Klebsiella*, 15% were caused by *E.coli* 5% were caused by *Streptococcus and* 15% were caused by *Pseudomonous*.

In this study, at a cut off level of α1AGP 120 / dl, the sensitivity was 75%, the specificity was 90%, positive predictive value (PPV) was 64.3% and negative predictive value (NPV) was 93.7%.

And at a cut off level of CRP 6mg /dl , the sensitivity was 85%, the specificity was 80%, positive predictive value (PPV) was 72.7% and negative predictive value (NPV) was89.5%.

AGP was elevated in septic neonates compared to the control group.

ROC curve analysis shows that α1AGP is better than CRP as an early marker of neonatal sepsis.but its high specificity is accompanied with low sensitivity. So single test of α1AGP is of limited value in the early diagnosis of neonatal sepsis.