Summary

Neonatal septicemia remains a major cause of morbidity and mortality in the neonatal period.

This study was done in The Neonatal Intensive Care Unit of Benha University Hospital from June 2006 to Feb. 2007 to clarify the role of leptin in diagnosis of neonatal septicemia compared to other more established measures as CRP, I/T, blood culture.

Our study was carried out on 50 newborns divided into 3 groups:

**Group (1):** Septicemic full term newborn (n = 30).

**Group (2):** Septicemic full term newborn after 2 weeks of antimicrobial therapy (n = 30).

**Group (3):** Healthy full term newborn (n = 20) as controls.

Each of the studied newborns was subjected to history taking, clinical examination and laboratory investigations including CBC, CRP, blood culture, I/T and leptin.

The serum leptin was done before and after antimicrobial therapy in septicemic group (n = 30) and was correlated to other haematological parameters.

In our study, there was positive correlation between leptin, CRP, I/T and start but after 2 weeks of antimicrobial therapy there was positive correlation between leptin and I/T only.
In our study, it has proven that leptin has a significant role in differentiation between early-onset and late-onset sepsis which remains challenging problem.

Our data provide evidence that leptin not only an adipostatic hormone, but also stress related hormone, sharing other proinflammatory mediators in playing major role in inflammatory response.

We suggested that serum level of leptin is elevated during infection and can be used as diagnostic marker for neonatal septicemia.