SUMMRY

Perinatal hypoxic stress is a common cause of neonatal morbidity, mortality and neurological disabilities. Of an approximately 130 million births in the world each year, about four million will suffer of perinatal asphyxia ,almost one million of them die and about one million will undergo serious sequalae .

HIE is not an un-common health problem in Egypt. It is one of the direct causes of infant mortality rate ranking only second to sepsis, the number one cause of neonatal morbidity and mortality.

Although recent advances in neonatal medicine, there is still difficulty in early detection and treatment of hypoxic ischemic encephalopathy .

This study was conducted in order to evaluate growth hormone and prolactin levels in newborns subjected to perinatal asphyxia and investigate possible relation between levels of growth hormone and prolactin , and severity of hypoxic ischemic encephalopathy[HIE] .

The study was conducted on 20 neonates presenting with symptoms, signs suggesting HIE admitted to the Neonatal Intensive Care Unit[NICU] of Benha Children Hospital [BENCH] . In addition 10 healthy neonates of comparable sex and age were included as control group and they were randomly picked up from the emergency unit of Benha Children Hospital during regular check up after birth. With the

help of the clinical pathology department of the Faculty of Medicine , Benha University .

All the study population were subjected to full history taking, through clinical and neurological examination, Assissment of severity of HIE usin Sarnet and Sarnet stages of HIE [**Sarnet and Sarnet 1976],** laboratory Investigations including CBC,CRP,blood gases,serumCa, blood glucose, serum Na, serum K, liver function[SGOT,SGPT],kidney function [blood urea,serum creatinine]and serum levels of GH,PRL by Roche Elyeces chemilumescent immunoassay; all obtained within the first two hours after birth .

Our study revealed highly significance and positive corresponding relationship between serum level of prolactin and HIE severity in cases compared to control group .

In this study GH serum level varied according to the severity of HIE and occurrence of convulsions, as in mild cases the GH showed no significance and its serum level remain in the same level compared to control group. While in moderate cases, GH was highly significant, but in severe cases GH was highly significant only in cases with convulsions, otherwise it was of no significance.

We also revealed that prolactin is more specific and sensitive to HIE than growth hormone .