SUMMARY

This research was conducted on 80 preterm neonates, who were admitted at NICU of Benha children hospital, they were 51 males (56.7%) & 29 females (43.3%). Their gestational age (G.A) ranged from 26 to 36 weeks with a mean of 33.9, they were grouped in two gestational age groups, group I (**≤ 30 wks**) and group II (**> 30 wks**) .

The present study aimed at detecting cranial ultrasonographic abnormalities in each group i.e group I (≤ 30 wks) and group II (> 30 wks) under the effect of different risk factors, with finding the relation between these ultrasonographic abnormalities and the presenting clinical data .

Detailed history taking and full clinical examination were performed before carrying out cranial ultrasonographic scanning for all neonates.

We found certain cranial ultrasonographic abnormalities including IVH, HIE, meningitis and/or ventriculitis congenital hydrocephalus and ACC.

The prematurity was considered a major risk factor for development of IVH and HIE.

In this study, total infants greater than 30 weeks gestation (group I) were 61 cases, we found 21 cases from this group having significant abnormalities on cranial US, while the remaining 40 cases were normal ultrasonographicaly .

Our results proved that all infants greater than 30 weeks gestation with significant abnormalities on cranial US had specific perinatal risk factors (eg; ante-partum hemorrhage, PROM, traumatic delivery, LBW,…) or clinical findings(eg; poor reflexes, pallor, cyanosis, convulsions and apnea) that would have indicated the need for prompt cranial US evaluation.

Regarding the other studed group (≤ 30 wks); total infants were 19 cases, we found 5 cases only from this group having normal cranial US, while significant cranial US abnormalities were detected in 14 cases. Our important finding in this group (≤ 30 wks) was the following: 3 cases were detected having significant abnormalities on cranial US despite lacking of any significant historical or clinical data,this means the following:

Our study supports the recommendation by the American Academy of Neurology and the Child Neurology Society that routine screening cranial US can be limited but suggests that the gestational age cut off should be 30 weeks or less.