
Summary &
Conclusion

SUMMARY

The hematopoietic growth factors or cytokines are glycoproteins that act as intracellular messenger regulating the proliferation, differentiation and maturation of hematopoietic progenitor cells as well as the survival and function of mature blood cells ***(Bailie et al., 1994).***

This study was carried out in the neonatal unit of Pediatrics Department together with Clinical Pathology Department in Benha University Hospital.

The study included 50 preterm and 10 full term neonates divided into 3 groups as follow:

Group I: 40 preterm neonates born to mothers suffering from pregnancy induced hypertension (22 males and 18 females with mean gestational age 32.3 ± 2.8 weeks).

Group II: 10 preterm neonates born to apparently healthy mothers (4 males and 6 females with mean gestational age 32.6 ± 2.7 weeks).

Group III: 10 full term neonates born to apparently healthy mothers (5 males and 5 females with mean gestational age 39.1 ± 1.2 weeks).

Group II and group III were considered as control groups.

All cases and controls were subjected to :

1- Full medical history taking.

2- Careful clinical examination.

3- Complete blood count with differential white blood cell count.

4- Detection of levels of GM-CSF and G-CSF in cord blood by ELISA.

In this study we fount that 37.5% of preterm in group I were neutropenic and 10% were thrombocytopinc.

Also our results showed that, the preterm neonates born to mothers with pregnancy induced hypertension (PIH), have higher incidence of SGA, VLBW, thrombocytopenia, and higher levels of hemoglobin and RBC count than preterm neonates born to normotensive mothers.

They, also have lower TLC, ANC, and G-CSF and GM-CSF levels than those of preterm neonates born to normotensive mothers. There was no difference in the lymphocytic count, birth weight or gestational age between the two groups.

Preterm neonates born to normotensive mothers have lower levels of G-CSF and GM-CSF than those of fullterm neonates born to normotensive mothers.

In group I, there was negative correlation between maternal blood pressure, and each of TLC, ANC, GM-CSF and G-CSF levels, birth weight of the preterm neonates.

Also, there was significant positive correlation between TLC, ANC and each of G-CSF and GM-CSF levels, birth weight and gestational age of the preterm neonates.

In conclusion, maternal pregnancy induced hypertension, low gestational age, and birth weight are significantly related to neutropenia in premature neonates. Also our results suggest that the low G-CSF and GM-CSF levels may contribute to the observed neutropenia.