Summary and Conclusion

Respiratory difficulty or distress is the most common neonatal emergency and the main cause of admission to (N.I.C.U.). R.D.S. is by far the most common cause of distress, followed by neonatal pneumonia, T.T.N., and M.A.S.

Sick neonates with respiratoy difficulties frequently become predisposed to hypoxaemia and hazardous haemodynamic changes during even the most common treatment procedures.

Beta endorphin is one of opioids which has different physiological effects. It is secreted from pituitary gland during respiratory distress, pregnancy, labour, and shock.

Our study aimed at the estimation of plasma beta endorphin, serum cortisol levels and blood glucose response to stress conditions.

The babies of this study were devided into 2 groups: patients group (gp A) which included (48) babies with (R.D.) who were categorized into (6) sub groups according to the cause of (R.D) into (R.D.S, M.A.S., Pneum., HIE, TTN, and polycyth.) subgroups. And group B (control group) which included (19) full term healthy babies delivered by S.V.D. Samples of babies were collected from Benha, Mansoura, Port Said, Zagazig and Abo Elreish (NICUs) at the beginning of May 98 and completed at December (98).

The babies were examined, thoroughly, clinically after a detailed history was taken and investigated for (C.B.C, CRP, ESR, CXR) beta endorphin, serum cortisol and blood glucose level.

The results of this study revealed that:

All the clinical parameters, (gestational age, Body weight, respiratory rate and heart rate) were affected in all patients of respiratory difficulties. They were higher in patients than control as regsards (RR, HR) but were smaller as regards body weight and gestational age and there was significant difference between them.

Also blood gases (PH, Pco_2, Po_2 & Hco_3) were affected and they were lower in patients group than the control group where distressed babies developed hypoxaemia and acidosis (often mixed type).

Our study revealed that in distressed babies, all haematological parameters (HB, Hct. V, RBCs) were affected and were significantly higher in patients than control cases.

Plasma beta endorphin level was higher in patients group (29.75 ± 1.6) than control groupand their mean value exceeded the mean value of control (10.32 ± 0.64) by many folds. But in comparison of different subgroups of patient to each other, we didn't find any significant difference.

Also serum cortisol level was higher in patients than the control group but intra group comparison to each other, there was no significant difference.

As regards blood glucose level we didn't find any significant difference between patients group and control group.

From our study we find positive correlation between R.D. and beta endorphin and cortisol secretion.

So we concluded that beta endorphin and cortisol are greathy increased in the diseased group (gp A) than the healthy control group (gp B). But we

didn't find any significant difference between the diseased groups in comparison to each other and this leaded us to speculate that respiratory difficulty regardless the cause of difficulty is associated with increase beta endorphin and cortisol secretion to face this stressful situation.

So exogenous use of opioids by physiological dose may be benifecial.