SUMMARY AND CONCLUSION

SUMMARY

We have studied the hypothesis that the increased concentration of breast-milk β-glucuronidase in diabetic mothe may be an additional cause of hyperbilirubinemia in their breast-fed infants.

The material comprised 30 breast-fed IDMs and 10 breast-fed infants of normal mothers randomized non consecuative full term healthy newborn babies of both sexes and their mothers. Babies with hyperbilirubinemia other than what is known as breast-milk jaundice or physiological jaundice were excluded. Maternal and neonatal samples were collected on day 3 of neonatal life.

β-glucuronidase concentratiion was estimated in breast milk of diabetic and non diabetic mothers, maternal and neonatal sera. Indirect bilirubin concentration was estimated in the sera of infants of diabetic and and non diabetic mothers. Glycosylated hemoglobin was measured in the blood of diabetic mothers.

The results revealed significantly higher concentrations of β–glucuronidase in serum and milk of diabetic mothers as compared with those of non-diabetic mothers. Also, the level of β-glucuronidase was significantly higher in IDM, than those in infants of non diabetic mothers. A significantly higher bilirubin concentrations were noted in IDMs group than infants of non diabetic mothers. A positive correlation was revealed between serum indirect bilirubin in one hand and β -glucuronidase enzyme in the infants'sera and mother's sera breast milk on the other hand. So this direct association between βG enzyme, indirect bilirubin level suggest that β-glucuronidase enzyme might have an important role in the production of neonatal jaundice.

Conclusion

1- β-glucuronidase enzyme in breast-milk of diabetic mothers is related to indirect hyperbilirubinemia in their breast-fed infants.

2- There is a positive correlation between the β-glucuronidase enzyme in breast-milk of diabetic mothers, its serum level in their brast-fed infants.

3- Levels of the β-glucuronidase in both milk and serum of diabetic mothers were significantly higher as compared with its levels in non-diabetic mpthers.

4- Higher levels of β-glucuronidase enzyme were found in the serum of IDMs than that of infants of non-diabetic mothers.

5- A significantly higher serum indirect bilirubin level was found in IDMs.

6- As breast-milk jaundice never causes kernicterus (**Cloherty, 1991**), it should be taken as a physiological phenomenon and can be minimized by early and frequent feeding which stimulates gut motility and decreases the intestinal reabsorption of bilirubin.

7- Breast-milk feeding is the principle mode of feeding infants all over the world and especially in developing countries.