Summary

Serum thyroid hormones, TSH, glucose and NEFA of 3 groups of newborn infants were compared using venous blood samples from the umbilical cord, after 20 normal vaginal deliveries, 20 emergency caesarean sections during labour, and 20 elective caesarean sections. The study was aimed to examine the influence of mode of deliveries on the neonatal thyroid hormones immediately after birth.

All newborn infants in our study were selected from uncomplicated pregnancies, with good general conditions, with similar gestational ages, from similar durations of labour, and with no apparent congenital anomalies.

Mean umbilical serum concentrations of thyroxine and triiodothyronine were significantly lower after normal vaginal deliveries. Also, mean umbilical serum thyroid stimulating hormone (TSH) was significantly lower after normal vaginal deliveries. No significant differences were observed in serum glucose and NEFA between the 3 groups.

These results suggest that labour reduces thyroid hormoes in newborn infants at birth. This may be the stimulus for the post partum surge in thyroid hormones previously reported to occur over the first few

hours after birth in vaginally delivered infants, and explain other studies that indicated the lower in thyroid hormones concentrations in caesarean section infants than those delivered per vaginum over the first 24 hours of life. We recommended an expanded study of newborn infants to see if these differences have clinical consequences or not, and also we recommended the study of the effect of instrumental deliveries and duration of labour on thyroid hormones.