

## **Influence of Perinatal Factors on Thyroid Stimulating Hormone Level in Cord Blood: A Cross Sectional Study**

### **Abstract**

**Background and Objectives:** Thyroid hormones play an important role in the fetus, since they are essential for maturation, differentiation and development of many organs. The aim of the study was to determine the effect of various perinatal factors on cord blood Thyroid stimulating hormone (TSH) among newborns in the study area.

**Materials and Methods:** A cross sectional descriptive study was carried out from May to October ٢٠١٤. A total number of ١٥٠ newborns delivered in Fayoum general and university hospitals, in Egypt were enrolled in the study. For all newborns one ml blood sample from umbilical vein was obtained. Cord blood TSH and birth body weight, gestational age, Apgar score and the mother's obstetric history were documented.

**Results:** Our study enrolled ١٥٠ newborns, ٧٢ (٤٨.٧%) were males and ٧٨ (٥١.٣%) were females. Among study parameters, gestational diabetes (GDM) and premature rupture of membranes (PROM) had statistically significant relation with cord blood TSH. There is statistically significant negative correlation between cord blood TSH and prematurity and ٥ minutes Apgar score respectively ( $r = -٠.٣٩$  &  $p = ٠.٠٤$ ), ( $r = -٠.١٦$  &  $p = ٠.٠٥$ ).

**Conclusion:** The preliminary data from our study revealed that the factors that can affect cord blood TSH were GDM, PROM, ٥ minutes Apgar score and prematurity.

**Key Words:** Cord blood, Perinatal factors, Thyroid stimulating hormone