ABSTRACT

Background:

Anaemia during pregnancy is associated with serious maternal and fetal complications. Haemoglobin level below 11 gm% in pregnancy is considered as anaemia according to WHO. Studies have shown that low Hb during pregnancy is associated with increased risk of low-birth weight and preterm birth and the incidence of which increases as severity of anaemia increases. Mothers who had anaemia were more likely to deliver anaemic babies. Cord blood hemoglobin of the newborn is an important indicator of anaemia in newborn at birth. So this study is done to assess the impact of maternal anaemia on cord blood haemoglobin levels of neonates.

Aims and objectives:

To study the impact of maternal anaemia on cord blood haemoglobin of neonates

Materials and methods:

This study is a cross sectional type of study done at Govt. kilpauk medical college and hospital in the Department of paediatrics from March 2016 to August 2016. According to inclusion criteria, 400 pregnant mothers attending the labour room in kilpauk medical college were included and cord blood haemoglobin of their babies were collected. Cord blood haemoglobin values of anaemic and
non anaemic group of mothers were compared. Among the anaemic mothers
the mean cord blood haemoglobin in the three groups (mild, moderate, severe)
were determined. The mean cord blood haemoglobin of each group was
compared with the mean cord blood haemoglobin of the neonates born to the
non anaemic mothers.

Results:

Out of 400 mothers, 192 mothers had haemoglobin less than 11g/dl and 208
mothers had haemoglobin more than 11g/dl. Among the anaemic mothers, 94
mothers had mild anaemia (haemoglobin between 10-10.9g/dl). 82 mothers had
moderate anaemia (haemoglobin between 7-9.9g/dl). 16 mothers had severe
anaemia with haemoglobin less than 7g/dl.

The mean cord haemoglobin among non anaemic mothers was 16.37 ± 0.85
and among the anaemic mothers it was 15.03±1.04. The mean maternal
haemoglobin in mothers with mild anaemia was 10.43± 0.23 and the mean
haemoglobin in mothers with moderate anaemia was 9.03± 0.85 and the mean
haemoglobin in mothers with severe anaemia was 6.6 ± 0.23.

The mean cord haemoglobin among the three groups (mild, moderate, severe)
was 15.54± 0.77, 14.7± 0.93 and 14.08± 0.88 respectively. The mean cord
haemoglobin between the anaemic and non anemic group was compared and
the difference between the two groups was statistically significant with p value
< 0.05.
Conclusion:

In our study we observed that maternal anaemia affects the cord haemoglobin of neonates. Our study infers that anaemic mothers deliver babies with lower haemoglobin compared to non anaemic mothers. We have found a linear relationship between maternal haemoglobin and cord blood haemoglobin of the newborns.

Keywords: cord blood Hb, maternal anaemia, neonates