Abstract

Objective

To study correlation between antenatal umbilical cord coiling index (UCI) and umbilical vein blood flow and perinatal outcome.

Methods

UCI and umbilical vein blood flow were determined in 200 antenatal women with ultrasonography and colour doppler between 20 to 28 weeks gestation. Results were correlated with following factors: gestational age of delivery, mode of delivery, meconium stained liquor, abnormal heart rate, birth weight, APGAR score and statistically analysed by Chi-square test.

RESULTS

Hypocoiling was associated with preterm deliveries, LBW, low APGAR, abnormal heart rate and NICU admissions. Hypercoiling was associated with SGA, caesarean sections, meconium staining of liquor, low APGAR and NICU admissions. Increased umbilical vein blood flow was associated with SGA, meconium stained liquor and abnormal foetal heart rate. Decreased umbilical vein blood flow was associated with preterm deliveries, low birth weight, low APGAR. Positive correlation was observed between UCI and umbilical vein blood flow. UCI and umbilical vein blood flow also had positive correlation with birth weight and low APGAR.

CONCLUSION

Abnormal coiling and abnormal umbilical vein blood flow can be used as a predictor of birth weight and low APGAR.

Key words

Low birth weight, Antenatal Umbilical Coiling index, Umbilical vein blood flow, Hypocoiling.