

## **UMBILICAL CORD GASES IN CORRELATION WITH CLINICAL DATA OF MOTHERS AND NEWBORNS**

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**Introduction:** Umbilical cord blood gasometry is increasingly used to assess clinical condition in newborns. The umbilical cord arterial blood acid base balance is considered to be the most accurate method to determining fetal metabolic condition at birth. Consensus among national expert bodies in obstetric practice around the world in regards to cord blood analysis to be performed at all births has not been reached yet.

**Material and methods:** Umbilical cord blood gasometry data from 163 infants collected in the Department of Gynecology and Obstetrics in Wroclaw (June-August 2016) was evaluated. Umbilical cord blood gasometry was collected from umbilical artery to assess acid base balance. Selected parameters of acid base balance (pH, pCO<sub>2</sub>, pO<sub>2</sub>, BE) were compared with available clinical data (Apgar scale, weight, duration of delivery, cesarean section vs vaginal birth, mother age and mother hemoglobin).

**Results:** The analysis of data showed, that there is statistical significant relationship between mother's haemoglobin and pH, pCO<sub>2</sub> in umbilical cord gasometry values. There was no correlation between the Apgar score, weight, duration of delivery and umbilical cord gases. Additionally correlations between way of delivery (cs vs nd) and the values of pH and SBE were found.

**Conclusion:** Umbilical cord gases correlate with maternal clinical condition. Analysis of umbilical cord gases is useful diagnostic tool in cases of suspected asphyxia and should be done in emergency situations.