

Fetal sleep-awake pattern during labor

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Objective:

The fetal sleep-awake pattern was evaluated in the last 3 hours of the active phase of labor in order to study its impact on the predictive value of the intrapartum cardiotocogram.

Methods:

Retrospective analyses of intrapartum cardiotocograms were carried out in 300 singleton and 42 twin pregnancies. The cardiotocograms were recorded in the last 3 hours of the active phase of labor. Visual analyses were performed by two independent well-trained MDs. Fetal sleep-awake patterns were evaluated on the basis of the Nijhuis criteria. The perinatal outcome too was analyzed.

Results:

The oxytocin augmentation was similar in the singleton and twin groups: 68.7 vs 66.7%, respectively. The number of sleep-awake period changes ranged from 4.3 to 4.8. The average number of F4 periods was virtually identical in singleton and the twin A and Twin B groups (2.1 ± 1 , 2.5 ± 0.9 and 2.4 ± 0.8). An F3 period was recorded in only 7 cases and only one fetus was in the F1 period during the 3 hours of observation. Vaginal delivery occurred in 71.7% vs 65.7% of singletons and twins, respectively. There was no perinatal loss; a cord blood pH < 7.20 occurred in 22% (singletons), 7.1% (twin A) and 14.2% (twin B).

Conclusion:

There is no up-to-date objective computerized evaluation model for intrapartum cardiotocograms. Analysis of the changes in the sleep-awake periods might help toward identification of a fetus at risk during labor.