

Intrapartum monitoring with cardiotocography and ST-waveform analysis in breech presentation: an observational study.

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Abstract

OBJECTIVE:

To determine the electrocardiographic performance and neonatal outcome of pregnancies with breech presentation and planned vaginal delivery monitored with ST-waveform analysis (STAN).

DESIGN:

Prospective observational study.

SETTING:

University hospital, Norway; 2004-2008.

POPULATION:

Singleton pregnancies with a gestational age above 35 + 6 weeks, breech presentation, selected for vaginal delivery and monitored with STAN.

METHODS:

Common clinical guidelines for STAN monitoring were used. An experienced neonatologist graded the symptoms of neonatal encephalopathy. The outcome was compared with STAN-monitored high-risk deliveries in a vertex presentation (n = 5569) using logistic regression analysis.

MAIN OUTCOME MEASURE:

Frequency of ST events, indications of intervention for fetal distress, and neonatal morbidity and mortality.

RESULTS:

Breech presentation occurred in 750 of 23 219 (3.2%) deliveries, 625 (83%) of which were selected

for vaginal delivery. Intrapartum monitoring by STAN was performed in 433 (69%). Compared with vertex presentations, fetuses in breech presentation had a lower risk of baseline T/QRS rise during labour [odds ratio (OR) = 0.7, 95% confidence interval (95% CI) = 0.7-0.9, P = 0.003] and a higher risk for intervention as a result of preterminal cardiotocogram (OR = 2.9, 95% CI = 1.6-5.9, P = 0.001). The risks of perinatal mortality (OR = 1.8, 95% CI = 0.2-15, P = 0.6), cord metabolic acidosis (OR = 0.8, 95% CI = 0.2-3.2, P = 0.7) and moderate or severe neonatal encephalopathy (OR = 1.8, 95% CI = 0.5-6.2, P = 0.3) did not differ significantly between breech and vertex deliveries.

CONCLUSION:

STAN can be used for the surveillance of breech presentations selected for vaginal delivery with an acceptable neonatal outcome. The electrocardiogram (ECG) pattern during labour varies with the fetal presentation.

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