

Intrapartum epidural analgesia and ST analysis of the fetal electrocardiogram.

Becker JH, Schaap TP, Westerhuis ME, Van Wolfswinkel L, Visser GH, Kwee A.

Department of Perinatology and Gynecology, University Medical Center Utrecht, Utrecht, the Netherlands. j.h.becker@umcutrecht.nl

OBJECTIVE: To evaluate the influence of intrapartum epidural analgesia on the occurrence of ST events of the fetal ECG.

DESIGN: Nested case-control study.

SETTING: Single-centre academic hospital in the Netherlands.

POPULATION: Laboring women with a high-risk singleton pregnancy in cephalic position beyond 36 weeks of gestation.

METHODS: Data of 72 women who received epidural analgesia using bupivacaine combined with sufentanil and 72 control women were collected and analyzed. The moment of epidural infusion was defined as $t(0)$. In the control group, $t(0)$ was defined by matching dilatation in centimeters. STAN registrations from one hour before until two hours after $t(0)$ were classified, and the numbers and types of ST events were recorded and judged according to the STAN clinical guidelines. T/QRS ratios were collected from one hour before $t(0)$ until two hours after $t(0)$, and differences were compared between the two groups.

MAIN OUTCOME MEASURES: Numbers and types of ST events and mean T/QRS ratios before and after $t(0)$.

RESULTS: There were no significant differences between cases and control women regarding the numbers of ST events, types of ST events and whether they were significant (intervention advised) or not. Correction for outliers (three cases and three control women) did not change the results. Differences of T/QRS ratios before and after $t(0)$ were comparable between cases and control women.

CONCLUSIONS: Epidural analgesia has no effect on the numbers or types of ST events when using ST analysis of the fetal ECG.