

Fetal electrocardiography in labor and neonatal outcome: data from the Swedish randomized controlled trial on intrapartum fetal monitoring.

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OBJECTIVE: Cardiotocography plus automatic ST analysis of the fetal electrocardiography has been shown recently to reduce both the operative delivery rate for fetal distress and the cord artery metabolic acidosis rate. The purpose of this study was to analyze findings that were related to cases with a complicated/adverse neonatal outcome in the Swedish randomized controlled trial.

STUDY DESIGN: Of the 4966 term fetuses that were included in the trial, all 351 newborn infants who required special neonatal care were identified. Cases of perinatal death, neonatal encephalopathy, or metabolic acidosis at birth were reviewed.

RESULTS: Of the 29 fetuses with adverse/complicated neonatal outcome, 22 fetuses had cardiotocography and ST patterns that indicated a need for intervention, according to the cardiotocography plus ST clinical guidelines. The number of live-born with moderate or severe neonatal encephalopathy showed a significant decrease from 0.33% (8/2447 fetuses) in the cardiotocography-only group to 0.04% (1/2519 fetuses) in the cardiotocography plus ST group.

CONCLUSION: Cardiotocography plus ST analysis provides accurate information about intrapartum hypoxia and may prevent intrapartum asphyxia and neonatal encephalopathy by giving a clear alert to the staff members who are in charge.