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Fetal electrocardiotocography in labor and neonatal outcome: an observational study in 1889 patients in the French center of Edouard Herriot, Lyon.

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BACKGROUND: The STAN methodology has been shown to reduce both operative delivery for fetal distress and the cord artery metabolic acidosis rate.

OBJECTIVE: The objective of this study was to monitor delivery modes and perinatal outcomes following the introduction of the STAN methodology and the evolution of its use at our institution.

METHODS: Two periods were characterized: June 2000-June 2002 (period 1) and July 2002-April 2005 (period 2). Parity, mode of labor and delivery, ST events, and neonatal outcome (Apgar score and pH of the umbilical cord artery and vein), cases of metabolic acidosis and operative delivery for fetal distress were studied.

RESULTS: One thousand eight hundred and eighty-nine women were included in the study. The rate of use of STAN increased from 13.5% to 16% over these two time periods. The rate of metabolic acidosis was low: 0.28% and 0.45%, respectively. No cases of neonatal encephalopathy or of perinatal death were diagnosed. There was a decrease in the rate of operative delivery for fetal distress (163/701 (22.9%) vs. 228/1111 (20.3%), $p = 0.26$).

CONCLUSIONS: According to the literature, our use of the STAN appears to be very successful; the metabolic acidosis rate was 0.38% and the rate of operative delivery for fetal distress decreased. We improved the accuracy of the interpretation of the fetal heart rate.