

Inter- and intra-observer agreement of intrapartum ST analysis of the fetal electrocardiogram in women monitored by STAN

MEMH Westerhuis, a E van Horen, a A Kwee, a I van der Tweel, b GHA Visser, a KGM Moons c
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ABSTRACT

Objective: The objective of this study was to quantify inter- and intra-observer agreement on classification of the intrapartum cardiotocogram (CTG) and decision to intervene following STAN guidelines.

Design: A prospective, observational study.

Setting: Obstetrics Department of a tertiary referral hospital.

Population: STAN recordings of 73 women after 36 weeks of gestation with a high-risk pregnancy, induced or oxytocin-augmented labour, meconium-stained amniotic fluid or epidural analgesia.

Methods: Six observers classified 73 STAN recordings and decided if and when they would suggest an intervention. Proportions of specific agreement (Ps) and kappa values (K) were calculated.

Main outcome measures: Agreement upon classification of the intrapartum CTG and decision to perform an intervention.

Results: Agreement for classification of a normal and a (pre)terminal CTG was good (Ps range 0.50-0.84), but poor for the intermediary and abnormal CTG (Ps range 0.34-0.56). Agreement on the decision to intervene was higher, especially on the decision to perform 'no intervention' (Ps range 0.76-0.94). Overall inter-observer agreement on the decision to intervene was considered moderate in five of six observer combinations according to the kappa (K range 0.42-0.73). Intra-observer agreement for CTG classification and decision to intervene was moderate (K range 0.52-0.67 and 0.61-0.75).

Conclusions: Inter-observer agreement on classification of the intrapartum CTG is poor, but addition of information regarding fetal electrocardiogram, especially in case of intermediary or abnormal CTG traces, results in a more standardised decision to intervene.