

Search strategy

STAN, HTA-report 2011:3

Question at issue

Does the use of ST analysis during delivery reduce the incidence of fetal metabolic acidosis and hypoxic ischemic encephalopathy, the frequency of operative and instrumental deliveries and the number of individuals for fetal blood sampling?

Patients/Problem – Intervention – Comparison – Outcome

Patients: Women in active labor with term pregnancy, a singleton fetus in cephalic presentation, ruptured membranes and need of continuous fetal surveillance.

Intervention: Continuous CTG registration via scalp electrode and computerized ECG analysis (STAN[®]).

Comparison: CTG registration (with or without scalp electrode continuous or intermittent).

Outcome: Frequencies of umbilical artery metabolic acidosis and hypoxic ischemic encephalopathy grade 1-3, CS and instrumental deliveries for fetal distress and non-fetal indications and individuals undergoing fetal blood sampling during delivery.

Inclusion criteria: metaanalysis, systematic reviews, RCT, observational studies.

Language: English, Swedish, Norwegian, Danish, German.

Literature search

Two medical information specialists performed literature searches covering publications until 15th of October 2010. The search was updated in PubMed the 16th of February 2011. Altogether 379 references were identified. After duplicates were sorted out 178 references remained for review of abstracts. Out of these references 143 did not meet the PICO or other inclusion criteria and were sorted out. Thirty-five full text articles were assessed by the information specialists. Eight articles did not fulfil PICO or other inclusion criteria and finally 27 articles were assessed by the project group. Twentyone articles were excluded by the project group. Some of them were used as additional literature as well as a few other studies of interest.

Finally six studies were included in the assessment of the STAN[®] methods, four RCTs, one observational study and one case-control study. They are listed with short summaries in Table 1. Reasons for exclusion are given in Table 2.

PubMed, October 2010 + February 2011

Results: 132 hits

fetal ecg waveform analysis OR fetal st waveform analysis OR fetal st segment analysis OR st-analysis OR "st analysis" OR stan

AND

fetal monitoring OR intrapartum monitoring OR cardiotocography OR cardiotocogram OR cardiotocograms OR ctg

Cochrane Library, October 2010

Results: 27 hits

fetal ecg waveform analysis OR fetal st waveform analysis OR fetal st segment analysis OR st-analysis OR "st analysis" OR stan

AND

fetal monitoring OR intrapartum monitoring OR cardiotocography OR cardiotocogram OR cardiotocograms OR ctg [ti, ab, kw]

EMBASE, October 2010

Results: 105 hits

(ecg waveform OR electrocardiogram waveform OR "st waveform") AND analysis AND fetal) OR st-analysis OR "st analysis" OR stan

AND

Cardiotocography OR cardiotocogram* OR ctg

Web of Science, October 2010

Results: 82 hits

Fetal ST waveform analysis OR Fetal ecg waveform analysis OR fetal ST-analysis OR fetal ST segment analysis OR ST-analysis OR STAN

AND

cardiotocography OR CTG OR Cardiotocogram OR Cardiotocograms OR Fetal Monitoring OR intrapartum fetal monitoring

CINAHL, October 2010

Results: 29 hits

(ecg waveform OR electrocardiogram* OR "st waveform") AND analysis AND fetal) OR st-analysis OR "st analysis" OR stan

AND

fetal monitoring OR intrapartum monitoring OR cardiotocography OR cardiotocogram OR cardiotocograms OR ctg

CRD, October 2010

Results: 4 hits

(cardiotocogr* OR ctg OR fetal monitoring OR intrapartum monitoring) AND (stan OR st-analysis OR ecg waveform analysis OR electrocardiogr* analysis)

Other sites, October 2010

HTA Sahlgrenska **0 hits**,

Other HTA-centers **0 hits**

www.clinicaltrials.gov : **1 hit**