Symphysial fundal height (SFH) measurement in pregnancy for detecting abnormal fetal growth

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RHL summary

Key Findings

- No trials comparing SFH measurement to serial ultrasound measurement of fetal growth.
- No differences in the incidence of small for gestational age (SGA) or perinatal deaths when comparing SFH measurement to abdominal palpation

Evidence included in this review

One randomized controlled trial was included in this review involving 1639 women. Patients were randomized at 14 weeks gestation to SFH measurement from 28 weeks or abdominal palpation plus measurement with a non-marked tape.

Quality assessment

The methodological quality of this trial was good. Blinding was not mentioned.

Clinical implications

No differences were seen when using SFH measurement for detection of SGA, perinatal deaths, neonatal hypoglycemia, admission to neonatal nursery, induction of labour, caesarean section compared to abdominal palpation. No comparisons with ultrasound measurements could be assessed. There is not enough evidence to discourage SFH measurements.

Further research

In the light of the findings and considering the extent use of SFH measurements in low and high income countries new trials evaluating its effectiveness in detecting abnormal fetal growth are needed.

Cochrane review

Citation: Robert Peter Japaraj, Ho Jacqueline J, Valliapan Jayabal, Sivasangari Subramaniam. Symphysial fundal height (SFH) measurement in pregnancy for detecting abnormal fetal growth. Cochrane Database of Systematic Reviews
Abstract

Symphysis fundal height (SFH) measurement is commonly practiced primarily to detect fetal intrauterine growth restriction (IUGR). Undiagnosed IUGR may lead to fetal death as well as increase perinatal mortality and morbidity.

The objective of this review is to compare SFH measurement with serial ultrasound measurement of fetal parameters or clinical palpation to detect abnormal fetal growth (IUGR and large-for-gestational age), and improving perinatal outcome.

We searched the Cochrane Pregnancy and Childbirth Group’s Trials Register (14 July 2015) and reference lists of retrieved articles.

Randomised controlled trials including quasi-randomised and cluster-randomised trials involving pregnant women with singleton fetuses at 20 weeks' gestation and above comparing tape measurement of SFH with serial ultrasound measurement of fetal parameters or clinical palpation using anatomical landmarks.

Two review authors independently assessed trials for inclusion and risk of bias, extracted data and checked them for accuracy.

One trial involving 1639 women was included. It compared SFH measurement with clinical abdominal palpation.

There was no difference in the two reported primary outcomes of incidence of small-for-gestational age (risk ratio (RR) 1.32; 95% confidence interval (CI) 0.92 to 1.90, low quality evidence) or perinatal death. (RR 1.25, 95% CI 0.38 to 4.07; participants = 1639, low quality evidence). There were no data on the neonatal detection of large-for-gestational age (variously defined by authors). There was no difference in the reported secondary outcomes of neonatal hypoglycaemia, admission to neonatal nursery, admission to the neonatal nursery for IUGR (low quality evidence), induction of labour and caesarean section (very low quality evidence). The trial did not address the other outcomes specified in the ‘Summary of findings’ table (intrauterine death; neurodevelopmental outcome in childhood). GRADEpro software was used to assess the quality of evidence, downgrading of evidence was based on including a small single study with unclear risk of bias and a wide confidence interval crossing the line of no effect.

There is insufficient evidence to determine whether SFH measurement is effective in detecting IUGR. We cannot therefore recommended any change of current practice. Further trials are needed.

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