

IMPAIRED FETAL GROWTH SYNTHESIS

RESEARCH GAPS FROM COCHRANE REVIEWS (Cochrane Library Issue 1, 2009)

The faces indicate the direction of findings in each review:

- ☺ Likely to be effective
- ☹ Both benefits and risks
- ❓ Uncertain or limited effect
- ☹ Likely to be ineffective or potentially harmful

*Important research implications are more likely to arise from
❓ reviews with uncertain findings
or where*

☹ the risks and benefits are mixed.

❓ **Bed rest in hospital for suspected impaired fetal growth (Say 1996a)**

In one included quasi-RCT, no differences were detected between bed rest and ambulatory management for fetal growth parameters and neonatal outcomes. Assessed as up- to-date: 28 October 2007

- Bed rest for suspected impaired fetal growth should only be used as a part of a well-designed trial

❓ **Betamimetics for suspected impaired fetal growth (Say 2001)**

In two included studies, no statistically significant differences were found between the betamimetic groups and the control groups for low birthweight, other anthropometric measures or neonatal morbidity and mortality.

Assessed as up- to-date: 28 October 2007

- Need evidence from physiological studies about the effects of betamimetic therapy on improving uteroplacental circulation or by increasing blood sugar and plasma insulin levels before testing in large RCTs
- Need to be able to detect possible harms, especially on carbohydrate metabolism, in any future studies.

❓ **Calcium channel blockers for potential impaired fetal growth (Say 1996b)**

In the one included trial (all smokers), mean birthweight was significantly higher in women receiving flunarizine compared with the control group; all other outcomes were not significantly different.

Assessed as up to-date: November 2006

- Consider further trials with sufficient numbers and which include both smoking and nonsmoking women

❓ **Hormones for suspected impaired fetal growth (Say 2003a)**

No studies were included as none of the potentially relevant trials reported clinical outcomes.

Assessed as up- to-date: November 2006

- Consider trials of hormones for suspected impaired fetal growth, in view of evidence from animal studies of a positive effect of oestrogens on uterine blood flow

? Maternal nutrient supplementation for suspected impaired fetal growth (Say 2003b)

Four small trials showed few differences between nutrient supplementation and controls except for carnitine being associated with shorter duration of pregnancy and intraamniotic administration of nutrients showing higher birthweight compared with intravenous administration.

Assessed as up- to-date: 30 December 2007

- Need further trials to evaluate the effectiveness and risks of nutrient therapy for suspected impaired fetal growth

? Maternal oxygen administration for suspected impaired fetal growth (Say 2003c)

In three included trials, oxygenation compared with no oxygenation was associated with a statistically significantly lower perinatal mortality rate, but higher gestational age in the oxygenation groups may have accounted for the difference in mortality rates.

Assessed as up- to-date: November 2006

- Need further trials of maternal oxygen therapy which are sufficiently large; this is likely to require multicentre collaboration.

? Plasma volume expansion for suspected impaired fetal growth (Say 1996c)

No RCTs were included.

Assessed as up- to-date: November 2006

- Need RCTs with adequate design and sample sizes to evaluate the possible advantages and risks of plasma volume expansion for suspected impaired fetal growth.

? Regimens of fetal surveillance for impaired fetal growth (Grivell 2008)

There is very little evidence to date (one RCT only) to indicate an optimal antenatal surveillance method for infants identified with impaired growth.

Assessed as up-to-date: 13 July 2008

- Need more trials to evaluate the effects of different regimens of fetal surveillance for impaired fetal growth.
- These studies need to be adequately powered to detect clinically relevant differences in maternal and infant health outcomes.
- Any future studies should include an assessment of women's views of care.

Transcutaneous electrostimulation for suspected placental insufficiency (diagnosed by Doppler studies) (Say 1996d)

No RCTs were included.

Assessed as up- to-date: November 2006

- Future RCT trials of this method of therapy should employ rigorous randomisation procedures.

REFERENCES

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