Specialized antenatal care clinics for women with a pregnancy at high risk of preterm birth (excluding multiple pregnancy) to improve maternal and infant outcomes

18 April 2016

RHL summary

Key Findings

The review assessed the value of specialized antenatal clinics for women with a pregnancy at high risk of preterm delivery when compared with ‘standard’ antenatal clinics. The review found:

- No significant difference in perinatal death, extremely preterm birth (<28 weeks), very preterm birth, gestational age at birth, neonatal intensive care unit admission and caesarean section between groups;
- Fewer preterm births (<37 weeks) in the pooled data in the intervention/experimental group. This finding did not reach statistical significance.
- No significant difference in the cost of care between the intervention and control group.
- No data on long-term follow up
- Insufficient statistical power to detect differences between groups

Evidence included in this review

Three studies carried out in the 1980’s and 1990’s in USA involving 3400 women were included in the review. One was a cluster-randomized trial. All trials focused on specialized clinics for women at high risk of preterm birth although the interventions differed slightly (cervical examination, education, bed rest, psychosocial support)

Quality assessment

The quality of evidence was assessed using criteria outlined in the Cochrane Handbook of Reviews of Interventions. The risk of bias was assessed to be either high or unclear, due to little information on study methods, lack of blinding and missing data.

Clinical implications

The complex nature of intervention packages and varied degrees of services being provided make interpretation of findings difficult. However, since the publication of the trials included in the review there is evidence of several effective interventions to reduce the risk of preterm birth and women at high risk are now offered to be followed at specialized antenatal care clinics in many places. It is likely that future trials
with proven effective interventions would show more concrete evidence of benefit.

Further research

It is not clear whether preventing preterm birth and retaining the foetus in an unfavourable uterine environment has any long-term effects. Future trials should focus on both short and long-term follow up, costs and should identify aspects of service provision preferred by women. They should also be conducted in all low, middle and high income-countries.

Cochrane review


Abstract

Amongst the risk factors for preterm birth, previous preterm delivery is a strong predictor. Specialised clinics for women with a history of spontaneous preterm delivery have been advocated as a way of improving outcomes for women and their infants.

To assess using the best available evidence, the value of specialised antenatal clinics for women with a pregnancy at high risk of preterm delivery when compared with 'standard' antenatal clinics.

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (30 June 2011).

All published, unpublished, and ongoing randomised controlled trials (including cluster-randomised trials) examining specialised compared with standard antenatal clinic care for women with a singleton pregnancy considered at high risk of preterm labour.

Two review authors independently assessed trial quality and extracted data.

We included three trials with 3400 women, all carried out in the USA. All focused on specialised clinics for women at high risk of preterm birth. Gestational age at delivery, preterm delivery, or both were primary outcomes in all studies. The interventions in the three trials differed.

Overall there was very little data on our prespecified outcomes. For most outcomes a single study provided data, hence there was not the statistical power to detect any possible differences between groups. There was no clear evidence that specialised antenatal clinics reduce the number of preterm births.

Specialised antenatal clinics are now an accepted part of care in many settings, and carrying out further randomised trials may not be possible. Any future research in this area should include psychological outcomes and should focus on which aspects of service provision are preferred by women. Such research could underpin further service development in this area.

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