TITLE: Elective Caesarean Section and Labour Induction: Guidelines

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RESEARCH QUESTIONS:

1. What are the guidelines regarding the optimal timing or appropriateness of elective caesarean section or induction of labour?

2. What are the guidelines for the management of elective caesarean section or induction of labour in rural clinical settings?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 2, 2010), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI Institute, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 2005 and February 2010. Filters were applied to limit the retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS:

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by evidence-based guidelines.
Four systematic reviews and three evidence-based guidelines were identified from the literature search results. No relevant health technology assessments or meta-analyses were identified. Additional potentially relevant articles are located in the appendix.

OVERALL SUMMARY OF FINDINGS:

Four systematic reviews examined various aspects of optimal timing or appropriateness of elective caesarean section or induction of labour. Three evidence-based guidelines on the appropriate circumstances for the induction of labour were also identified in the literature search.

One systematic review compared active with expectant delivery management in women with gestational diabetes (GDM). Using either the estimated fetal weight or gestational age of these women, they sought to estimate both the benefits and harms for the choice of timing of induction or elective caesarean delivery. Witkop et al. concluded that the rates of macrosomia and other related fetal outcomes may be reduced in women with GDM who have active as opposed to expectant management of labour. Another systematic review examined elective repeat caesarean section and induction of labour in women with a previous caesarean birth. This report concluded that both elective repeat caesarean section and induction of labour were associated with benefits and harms.

One systematic review and a guideline reported on indications and contraindications of labour induction. Mozurkewich et al. reported that the evidence supported recommendations for the induction of labour for post-term gestation, premature rupture of membranes at term, and premature rupture of membranes near term with pulmonary maturity. A reduction in intraterine fetal death for intrauterine growth retardation/restriction before term was identified with induction; however, increased caesarean deliveries and neonatal deaths also occurred. Sufficient evidence was not available to support inductions for cholestasis of pregnancy, fetal macrosomia or gastroschisis, maternal cardiac disease, oligohydramnios, twin gestations, and women with insulin-requiring diabetes. Guidelines from the American College of Obstetricians and Gynecologists pertain to numerous maternal and fetal conditions. The specific contraindications stated in the guidelines are vasa previa or complete placenta previa, transverse fetal lie, umbilical cord prolapse, previous classical caesarean delivery, active general herpes infection, and previous myomectomy entering the endometrial cavity. Additional detail is reported in the full guideline.

The timing of labour induction was examined in one systematic review and one guideline. Gulmezoglu et al. evaluated the benefits and risks associated with awaiting spontaneous labour or later induction of labour compared with a policy of labour induction at term or post-term. Fewer perinatal deaths were associated with a policy of labour induction at 41 completed weeks or beyond. Women in the labour induction group who were induced at 37 to 40 completed weeks were less likely to have a caesarean section compared with their matched counterparts in the expectant management group. There were also fewer babies with meconium aspiration syndrome in the labour induction group. The evidence-based guideline discussed the optimal timing and appropriateness of the management of pregnancy post 40 weeks. These guidelines stated that women should be offered the option of membrane sweeping commencing at 38 to 41 weeks. Induction at 41+0 to 42+0 weeks should also be offered.
The NICE clinical guidelines for the National Collaborating Centre for Women’s and Children’s Health developed key recommendations regarding the timing and suitability for labour inductions. They recommend that inductions be offered between 41+0 and 42+0 weeks for uncomplicated pregnancies. In the circumstance of preterm prelabour rupture of membranes, induction of labour is not indicated before 34 weeks unless there are obstetric indications. However, if the membranes rupture after 34 weeks, the maternal and fetal risks and benefits associated with induction must be discussed along with the local availability of neonatal intensive care facilities. The choice of induction of labour (which is appropriate approximately 24 hours after membrane rupture) or expectant management should also be offered to women with prelabour rupture of membranes at term (over 37 weeks). Induction of labour, caesarean section, or expectant management should also be offered on an individual basis to women who have undergone a previous caesarean section.

In general, the literature identifies that induction of labour is appropriate at term, post-term, or subsequent to a previous caesarean section provided the parents are informed of all the risks and benefits prior to making their decision. Specific contraindications or maternal and fetal conditions also indicate the appropriateness of labour induction. There was no literature identified for the management of elective caesarean section or induction of labour in rural clinical settings.
REFERENCES SUMMARIZED:

Health technology assessments

No literature identified.

Systematic reviews and meta-analyses


Guidelines and recommendations


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APPENDIX – FURTHER INFORMATION:

Review articles


Observational studies


Clinical practice guidelines

Additional references