WHO recommendation on sweeping of membranes for reducing formal induction of labour

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Recommendation

Sweeping membranes is recommended for reducing formal induction of labour.

(Moderate-quality evidence, strong recommendation)

Publication history

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Assessed as up-to-date: February 2011

Remarks

- The panel acknowledged that maternal discomfort and bleeding associated with the procedure should be balanced with the anticipated benefits. Since the interval between intervention and result (i.e. sweeping membranes and initiation of labour) can be longer than with formal methods of induction of labour, this intervention would be suitable for non-urgent indications for pregnancy termination.
- Regarding breast stimulation, sexual intercourse and other similar methods of pre-induction of labour, the participants in the technical consultation agreed that there was insufficient evidence for recommending those methods.

Background

Induction of labour is defined as the process of artificially stimulating the uterus to start labour.(1) It is usually performed by administering oxytocin or prostaglandins to the pregnant woman or by manually rupturing the amniotic membranes. Over the past several decades, the incidence of labour induction for shortening the duration of pregnancy has continued to rise. In developed countries, the proportion of infants delivered at term following induction of labour can be as high as one in four deliveries. (2-4)

Over the years, various professional societies have recommended the use of induction of labour in circumstances in which the risks of waiting for the onset of spontaneous labour are judged by clinicians to be greater than the risks associated with shortening the duration of pregnancy by induction. These
circumstances generally include gestational age of 41 completed weeks or more prelabour rupture of amniotic membranes, hypertensive disorders, maternal medical complications, fetal death, fetal growth restriction, chorioamnionitis, multiple pregnancy, vaginal bleeding and other complications.

Although currently available guidelines do not recommend this, induction of labour is increasingly being used at the request of pregnant women to shorten the duration of pregnancy or to time the birth of the baby according to the convenience of the mother and/or health-care workers. (5, 6) During induction of labour, the woman has restricted mobility and the procedure itself can cause discomfort to her. To avoid potential risks associated with the procedure, the woman and her baby need to be monitored closely. This can strain the limited health-care resources in under-resourced settings. In addition, the intervention affects the natural process of pregnancy and labour and may be associated with increased risks of complications, especially bleeding, caesarean section, uterine hyperstimulation and rupture and other adverse outcomes. (2, 7)

Methods

The recommendation was developed using standardized operating procedures in accordance with the process described in the “WHO handbook for guideline development”, guided by the GRADE approach. (7, 8) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on induction of labour (2011). (9)

A Cochrane systematic review was conducted, on sweeping membranes and induction of labour. (10) In the review, randomized controlled trials relevant to the key question were screened by review authors, and data on relevant outcomes and comparisons were extracted. Evidence profiles (in the form of GRADE tables) were prepared for comparisons of interest, including the assessment and judgments for each outcome, and the estimated risks.

WHO convened a Guideline Development Group (GDG) meeting on recommendations induction of labour in April 2010, where this recommendation was developed. The GDG comprised of a group of independent experts, who used the evidence profiles to assess evidence on effects on the pre-specified outcomes. GDG members discussed the balance between desirable and undesirable effects, overall quality of supporting evidence, values and preferences of stakeholders, resource requirements, cost-effectiveness, acceptability, feasibility and equity, to formulate the recommendation. Remarks were added to clarify the recommendation, and aid implementation.

Recommendation question

For this recommendation, we aimed to answer the following question:

- in pregnant women at or beyond term (P), does sweeping of membranes for reducing formal induction of labour (I), compared to no intervention, (C), improve maternal and perinatal outcomes (O)?

Evidence Summary

In this document, formal induction of labour is restricted to the use of oxytocin, misoprostol and other prostaglandins, and balloon catheter for bringing the uterus into labour. In this context, sweeping membranes is regarded as an intervention that aims to reduce the need of formal induction of labour.

A systematic review (10) including 21 studies involving 3443 women summarizes the evidence on sweeping membranes and induction of labour. Comparison of sweeping membranes with expectant management found
that the latter was not associated with an increased risk of caesarean section, Apgar score less than seven at 5 minutes of life, serious maternal morbidity or death, admission to a neonatal intensive care unit, or perinatal death. However, sweeping membranes was associated with a 33% reduction in the risk of formal induction of labour (14 trials, 2446 women, RR 0.67, 95% CI 0.59–0.76). Moreover, there was also a 23% lower risk of not being in labour or not delivering within 48 hours (5 trials, 726 women, RR 0.77, 95% CI 0.7–0.84). Compared with expectant management, an increased risk of vaginal bleeding and discomfort during vaginal examination has been observed with sweeping of membranes, although no major differences have been observed with regard to the priority outcomes (EB Table 2.11.1).

**Implementation considerations**

- The successful introduction of this recommendation into national programmes and health-care services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. The adaptation and implementation processes may include the development or revision of existing national guidelines or protocols based on this recommendation.
- The recommendation should be adapted into a locally appropriate document that can meet the specific needs of each country and health service. Any changes should be made in an explicit and transparent manner.
- A set of interventions should be established to ensure that an enabling environment is created for the use of the recommendations (including, for example, the availability of induction agents and monitoring capacity), and that the behaviour of the healthcare practitioner changes towards the use of this evidence-based practice.
- In this process, the role of local professional societies is important and an all-inclusive and participatory process should be encouraged.

**Research implications**

The GDG identified that further research on the following high-priority questions is needed:

- Regarding the combination of amniotomy and oxytocin for induction of labour, how long after, and based on what indicators, should amniotomy be performed?
- How can the Bishop score be used in selecting the method of induction of labour in clinical practice?

**Related Links**

- [Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice](https://www.who.int/reproductive-health/publications/essentials cadre/essentials cadre_pregnancy_childbirth_postpartum_newborn/en/)

Supporting systematic review:

References


Citation


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