WHO recommendation on the use of oxytocin for prevention of delay in labour in women receiving epidural analgesia

19 May 2014

Recommendation

The use of oxytocin for prevention of delay in labour in women receiving epidural analgesia is not recommended.

(Weak recommendation, low-quality evidence)

Publication history

First published: May 2014

Updated: prioritized for updating in 2018

Assessed as up-to-date: May 2014

Remarks

- Augmentation with oxytocin should be performed when indicated as treatment of confirmed delay of labour progress in women receiving epidural analgesia.

Background

Difficult labour (or dystocia) is characterized by abnormally slow labour progress arising from inefficient uterine contractions, abnormal fetal presentation or position, inadequate bony pelvis or abnormalities of the pelvic soft tissues of the mother. (1, 2) Evidence suggests that up to one third of first-time mothers experience delay in the first stage of labour. (3)

Augmentation of labour is the process of stimulating the uterus to increase the frequency, duration and intensity of contractions after the onset of spontaneous labour. It has commonly been used to treat delayed labour when uterine contractions are assessed to be insufficiently strong or inappropriately coordinated to dilate the cervix. Labour augmentation has traditionally been performed with the use of intravenous oxytocin infusion and/or artificial rupture of amniotic membranes (amniotomy). The procedure aims to shorten labour in order to prevent complications relating to undue prolongation, and to avert caesarean section. There is
evidence that a significant proportion of women with uncomplicated pregnancies are subjected to routine augmentation of labour with oxytocin. (4)

While augmentation of labour may be beneficial in preventing prolonged labour, its inappropriate use may cause harm. Augmentation with synthetic oxytocin may result in uterine hyperstimulation, with adverse effects such as fetal asphyxia and uterine rupture, and thus increase the risk of a cascade of interventions during labour and delivery. (5)

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.(6) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on augmentation of labour (2014).(7) A Cochrane systematic review was conducted, on the routine use of oxytocin for improving outcomes for women undergoing epidural analgesia in labour.(8) 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 on augmentation of labour in September 2013, 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.

Further information on procedures for developing this recommendation are available here.

Recommendation question

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

- in women in labour receiving epidural analgesia (P), does use of oxytocin for prevention of delay in labour (I), compared to no intervention, (C), prevent delay in labour (O)?

Evidence Summary

Evidence relating to the routine use of oxytocin for improving outcomes for women undergoing epidural analgesia in labour was extracted from a Cochrane systematic review of two trials (319 women) comparing oxytocin augmentation with placebo (saline) for women undergoing epidural analgesia who otherwise would have been managed expectantly.(8) Both trials were carried out in the United Kingdom and only included nulliparous women in spontaneous labour. One of the trials randomized 226 women at full cervical dilatation while the other recruited 93 women at six cm or less cervical dilatation.
There were no statistically significant differences between comparison groups for any of the critical or important outcomes reported.

**Oxytocin versus placebo for women under epidural analgesia: maternal outcomes**

- No significant differences were observed between the groups in the incidence of PPH (RR 0.96, 95% CI 0.58 to 1.59), overall caesarean section rate (RR 0.95, 95% CI 0.42 to 2.12), instrumental vaginal birth (RR 0.88, 95% CI 0.72 to 1.08) or uterine hyperstimulation (RR 1.32, 95% CI 0.97 to 1.8).

**Oxytocin versus placebo for women under epidural analgesia: infant outcomes**

- Few neonatal outcomes were reported. Compared to women receiving placebo, those who received oxytocin had similar observations for infants with low Apgar scores at five minutes (RR 3.06, 95% CI 0.13 to 73.33), and admission to NICU (RR 1.07, 95% CI 0.29 to 3.93), although data were very sparse for both of these outcomes.

Further information and considerations related to this recommendation can be found in the WHO guidelines, available at: [http://apps.who.int/iris/bitstream/handle/10665/112826/WHO_RHR_14.15_eng...](http://apps.who.int/iris/bitstream/handle/10665/112826/WHO_RHR_14.15_eng...)

**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 augmentation 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:

- What are the comparative effects of oxytocin alone, amniotomy alone and concurrent oxytocin and amniotomy in women with confirmed delay in the first stage of labour?
  - How does the sequence of oxytocin and amniotomy as concurrent interventions affect outcomes when used for labour augmentation?

- What is the safest maximum dose of oxytocin for labour augmentation?

- What is the safest and most effective incremental rate of oxytocin infusion for labour augmentation?
Related Links

WHO recommendations for augmentation of labour (2014) –full document and evidence tables

Supporting systematic review:


References


Citation


Published on RHL (https://extranet.who.int/rhl)

Home > WHO recommendation on the use of oxytocin for prevention of delay in labour in women receiving epidural analgesia

Page 4 of 4