WHO recommendation on treatment for women with severe postpartum hypertension

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Recommendation

Treatment with antihypertensive drugs is recommended for severe postpartum hypertension.

(very low-quality evidence, strong recommendation)

Publication history

First published: October 2011

Updated: no update planned

Assessed as up-to-date: October 2011

Remarks

- The guideline development group recognized the need for discharge instructions, including education concerning the signs and symptoms associated with postpartum hypertension.
- In women receiving postpartum antihypertensive treatment, at the present time it is not known at what point the treatment and monitoring of hypertension could be stopped. Hence, the group highlighted this topic as a research priority.
- The guideline development group put more emphasis on the frequency of postpartum deaths related to stroke and recognized that the maximum increase in blood pressure usually occurs towards the end of the first postpartum week (when, in most settings, women have been already discharged from facility care).
- In women diagnosed with mild pre-eclampsia antenatally, but not treated with antihypertensive drugs, the initiation of antihypertensive treatment postpartum should be considered for minimizing the risk of complications of severe high blood pressure (see third remark above). That remark was made based on expert opinion and considering the evidence related to the treatment of mild/moderate hypertension during pregnancy. In the postpartum period, the maternal risk of a complication of hypertension is not counterbalanced by the risk of an adverse fetal effect produced by maternal hypotension.
- The guideline development group considered that there is little clinical uncertainty over whether treatment of severe postpartum hypertension is beneficial. This recommendation was made based on expert opinion and the guideline development group considered that most maternal deaths related to hypertensive disorders are associated with complications of uncontrolled severe high blood pressure. Based on that, the guideline development group agreed that antihypertensive treatment should be
recommended in all cases of severe acute hypertension.

Background

Hypertensive disorders of pregnancy are an important cause of severe morbidity, long-term disability and death among both mothers and their babies. Worldwide, they account for approximately 14% of all maternal deaths, whereas in Latin America and the Caribbean, they contribute to approximately 22% of all maternal deaths.(1)

Among the hypertensive disorders that complicate pregnancy, pre-eclampsia and eclampsia stand out as major causes of maternal and perinatal mortality and morbidity. The majority of deaths due to pre-eclampsia and eclampsia are avoidable through the provision of timely and effective care to the women presenting with these complications.

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.(2, 3) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on prevention and treatment of pre-eclampsia eclampsia (2011).(4)

A Cochrane systematic review was conducted, on routine post-natal antihypertensive drug therapy use for prevention of postpartum hypertension in women with antenatal pre-eclampsia or mild to moderate hypertension.(5) 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 for prevention and treatment of pre-eclampsia or eclampsia in April 2011, 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/s:

- in women with postpartum severe hypertension (P), does treatment with one antihypertensive drug (I) compared to placebo or no treatment (C), affect maternal outcomes (O)?
- if so, is one hypertensive agent more advantageous than others?

Evidence Summary

Evidence related to the effects of routine postnatal antihypertensive drug therapy compared with no
treatment for the prevention of postpartum hypertension in women with antenatal pre-eclampsia and for improving outcomes in women with mild to moderate hypertension was obtained from a Cochrane review of eight RCTs. (5) The trials were relatively small, with a total of only 622 women. Three trials (313 women) compared a policy of routine administration of oral antihypertensive drugs (furosemide or nifedipine) with an approach that used antihypertensive drugs only for severe postpartum hypertension in women with antenatal pre-eclampsia. The relative risks were not estimable for the reported critical (and proxy) outcomes (namely maternal death, maternal organ failure, maternal side-effects necessitating changing of drug and severe hypotension) as no events were recorded in either of the two arms of each trial (EB Table 52).

The Cochrane review identified no trial that compared antihypertensive drug therapy with placebo for women with mild to moderate postpartum hypertension. Three trials (189 women), however, compared timolol, hydralazine and nifedipine with methyldopa for the treatment of mild to moderate postpartum hypertension. Two of these trials (106 women) recorded no case of maternal death in the two groups. There was also no significant difference between the two groups in terms of the risk of medication being changed due to maternal side-effects (two trials, 106 women; RR 0.50, 95% CI 0.05–5.30). Two trials (120 women) compared intravenous hydralazine with either sublingual nifedipine or labetalol for the treatment of women with severe postpartum hypertension. No case of maternal death or maternal hypotension was reported for this comparison (EB Table 53).

The trials providing evidence for critical outcomes in the above comparisons were all at a moderate risk of bias. This level of bias in addition to their generally small sample size and sparse events resulted in very low overall quality of evidence.

**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 antihypertensive medications and blood pressure monitoring equipment), 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 2011 GDG identified the following high-priority research question on this intervention:

- Treatment schedules for women with postpartum hypertension (including timing of stopping treatment) need to be studied further.

**Related Links**

[WHO recommendations on prevention and treatment of pre-eclampsia and eclampsia (2011) - full document](#)
References


Citation


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