There is limited evidence for the effectiveness of treatment of postpartum anaemia with erythropoietin. Also, there remains a risk of serious adverse reactions from erythropoietin. Simple and more cost-effective strategies - particularly oral iron therapy - are available to improve clinical outcomes for affected women.

RHL Commentary by Huertas E

1. EVIDENCE SUMMARY

This review analysed data from six trials (involving 411 women) which evaluated treatments (intravenous or subcutaneous erythropoietin versus intravenous or oral iron) for postpartum iron-deficiency anaemia. Each of the six trials had fewer than 100 participants. No randomized control trials were identified that assessed treatment with blood transfusion or oral iron supplementation alone (the most common treatment for this type of anaemia).

Only two of the 22 outcomes (related to clinical maternal and neonatal factors) proposed by the reviewers could be analysed because the included trials focused largely on haematological indices that were not prespecified in the review protocol as outcome measures of relevance. The only outcome that showed a statistically significant effect in favour of one intervention (erythropoietin plus iron) was lactation at discharge. The effects of erythropoietin on blood indices were unclear since one trial could not demonstrate an increase in such indices when compared with placebo.

Subgroup analysis could not be performed due to the small number of women in the groups studied, and also because of lack of data (severity of anaemia at trial entry, for example).

Electronic searches of the Cochrane Controlled Trials Register, MEDLINE, EMBASE, Current Contents and ACP journal club were used to identify and retrieve the trials. Thus, the likelihood of missing relevant trials is low. All trials were scored for their quality, and treatment results were calculated using relative risk estimates (RR) and weighted mean differences (WMD). The data are clearly tabulated and graphically depicted for different treatments taking into consideration the outcomes evaluated.

2. RELEVANCE TO UNDER-RESOURCED SETTINGS

2.1. Magnitude of the problem

Iron-deficiency anaemia is recognized as the most prevalent nutritional problem in the world (1). Pregnant
women are at a particularly high risk of iron-deficiency anaemia, and in developing countries prevalence rates range from 35% to 75% (2). In Peru, 35% of women of childbearing age and 50% of pregnant women have anaemia (3 4). In spite of the lack of local data about postpartum iron-deficiency anaemia, we can assume that the rate would be similar to the one for prevalence during pregnancy. There is evidence that postpartum anaemia is common among low-income women even in resource-rich countries (5 6).

2.2. Applicability of the results

The results of the Cochrane review are not applicable to under-resourced settings because erythropoietin is expensive, needs to be given intravenously in order to reduce the risk of antibody formation (7), and has uncommon but serious adverse effects (8).

2.3. Implementation of the intervention

Available evidence is not strong enough to recommend the use of erythropoietin as a treatment for postpartum iron-deficiency anaemia in under-resourced settings; the intervention did not show clear benefits for the patients. Moreover, simple and more cost-effective strategies—particularly oral iron therapy—are available to improve clinical outcomes for the affected women. Also, there remains a risk of serious adverse reactions from erythropoietin.

3. RESEARCH

There is a need to evaluate the effectiveness of oral and parental iron in the treatment of postpartum anaemia in under-resourced settings. Such trials should focus on clinically relevant outcomes such as maternal outcomes, safety, and the extent to which health system resources are needed in treatment delivery. Future trials must also examine the significance of severity of anaemia in relation to treatment and an iron-rich diet as an intervention.

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