

Is oral or IV iron therapy more beneficial for postpartum anemia?

IV iron is the better choice for a select group of women.

In a systematic review that evaluated more than 1,000 women who received oral iron versus 1,000 women who received intravenous (IV) iron for postpartum anemia (defined as hemoglobin level less than 12 g/dL), IV iron preparations were more effective in raising hemoglobin levels (almost 1 g/dL higher) at 6 weeks postpartum and were better tolerated than oral iron.

EXPERT COMMENTARY

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Sultan P, Bampoe S, Shah R, et al. Oral versus intravenous iron therapy for postpartum anemia: a systematic review and meta-analysis. Am J Obstet Gynecol. Published online December 19, 2018. DOI:10.1016/j.ajog.2018.12.016.

Iron deficiency anemia in pregnancy is associated with increased risk for adverse birth outcomes, including preterm delivery, cesarean delivery, and need for blood transfusion.^{1,2} Although the outcomes with postpartum iron deficiency anemia are more difficult to study, this condition is associated with increased risk of maternal fatigue and depression, and it is often overlooked as a significant issue during the postpartum period.

In a recent systematic review, Sultan and colleagues sought to provide an updated assessment of IV versus oral iron treat-

ment for postpartum anemia. The 6-week postpartum hemoglobin concentration was the primary outcome.

Details of the study

The authors screened 2,744 articles for randomized controlled trials (RCTs) comparing oral and IV iron in the treatment of postpartum anemia. Fifteen RCTs were included in the review, with 1,001 women receiving oral iron therapy and 1,181 women receiving IV iron. The baseline postpartum hemoglobin concentration in the 15 studies ranged from less than 8 g/dL to 10.5 g/dL.

In all but 1 study, the women in the IV treatment arm experienced a significant increase in postpartum hemoglobin concentration, with the mean difference being 1.0 g/dL at postpartum week 1 (95% confidence interval [CI], 0.5–1.5; $P < .0001$) and 0.9 g/dL at postpartum week 6 (95% CI, 0.4–1.3; $P = .0003$).

Only 4 studies were included in the meta-analysis; specifically, 6-week postpartum hemoglobin levels were measured in 251 women who received IV iron and in 134 who received oral iron. Significant differences were seen in the IV iron group compared with the oral iron group for 3 of the secondary outcomes evaluated: flushing (odds ratio

FAST TRACK

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WHAT THIS EVIDENCE MEANS FOR PRACTICE

Given the efficacy and reduced adverse effects associated with IV iron therapy demonstrated in the systematic review by Sultan and colleagues, I recommend treatment with IV iron for women with moderate to severe postpartum anemia (defined in pregnancy as a hemoglobin level less than 10 g/dL and ferritin less than 40 µg/L) who have not received blood products or for women who are unable to tolerate or absorb oral iron (such as those with a history of bariatric surgery, gastritis, or inflammatory bowel disease). In our institution, we frequently give IV iron sucrose 300 mg prior to discharge due to ease of administration. For women with mild iron deficiency anemia (hemoglobin greater than 10 g/dL), I prescribe every-other-day oral iron in the form of ferrous sulfate 325 mg, which effectively raises the hemoglobin level and limits the gastrointestinal side effects associated with more frequent dosing.

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[OR], 6.95), decreased constipation (OR, 0.08), and decreased dyspepsia (OR, 0.07).

None of the other secondary outcomes associated with IV iron (muscle cramps, headache, urticaria, rash, or anaphylaxis) occurred at statistically significant rates. Notably, adherence was not assessed in the majority of the studies. Although constipa-

tion was increased in the oral iron therapy group, it was reported at only 12%.

Study strengths and weaknesses

Results of this study support previous findings that IV iron is better tolerated, with fewer gastrointestinal adverse effects, than oral iron, and they re-emphasize that IV iron therapy is both safe (the authors identified only 2 cases of anaphylaxis) and effective in improving hematologic indices.

The systematic review included studies, however, that excluded women treated for antepartum anemia, a group that may benefit from aggressive correction of iron deficiency. Another study weakness is that all the oral iron regimens used were dosed either daily or multiple times per day, which may lead to difficulty with adherence and can decrease overall iron absorption compared with an every-other-day regimen.³

Future studies are needed to determine 1) which women with what level of anemia will benefit the most from postpartum IV iron and 2) the hemoglobin level at which IV iron is a cost-effective therapy. ●

FAST TRACK

These study results support previous findings: IV iron is better tolerated, with fewer GI side effects, than oral iron and is both safe and effective in improving hematologic indices

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