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POSTER

905. OUTCOMES RESEARCH: NON-MALIGNANT CONDITIONS EXCLUDING HEMOGLOBINOPATHIES

High dose iron infusions in pregnant women are effective, safe, and well-tolerated

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Abstract Background: Iron infusions in pregnant women who have iron deficiency anemia (IDA) have been shown to be effective, safe, and well-tolerated. However, there has been a reluctance to prescribe the high dose iron formulations Ferric Derisomaltose (FDI) 1000mg or Ferumoxytol (FM) 510mg to pregnant women, because of a longer experience with iron sucrose (IS) 200mg. In this paper, we compare efficacy, safety, and tolerability of FDI, FM, and IS among pregnant women.
Methods: In this single center case series, pregnant women in their 2nd or 3rd trimesters, who had iron deficiency (ID, ferritin<30ng/mL or Fe sat<20%) without anemia (IDWA, hemoglobin >12 g/dL) or with anemia (IDA, hemoglobin <12g/dL) received iron infusions in an outpatient infusion center with nurses trained to monitor patients carefully for infusion reactions. Before the infusions, the patients were assessed in a hematology consult for symptoms of ID, including shortness of breath, fatigue, and ice craving/ice chewing, as well as lab testing consistent with ID.
The iron formulation each woman received was determined by her health plan coverage and, in some cases, by her experience with prior iron infusions. Most women with IDWA were prescribed 400-500mg iron and most women with IDA were prescribed 800-1000mg iron. Two weeks after the final infusion, follow-up iron and blood counts were measured, and symptoms were re-assessed in a follow-up visit. Safety and tolerability of iron infusions were determined by reviewing frequency of reactions that occurred during infusions (observed) including complement activation-related pseudo allergy (CARPA) and immune-mediated hypersensitivity reactions, as well as transient discomfort within the first few days after iron infusions (assessed by self-reports or reported during follow-up visits).
Results: 2,225 pregnant women with IDWA (n=186) or IDA (n=2,039) received 4,981 iron infusions between June 2021 and June 2023, including Ferric Derisomaltose (FDI) 1000 mg (n=644), Ferumoxytol (FM) 510 mg per dose (n=405), or Iron Sucrose (IS) 200-400mg per dose (n=1,035). The average total iron dose received was 1000mg for FDI, 986mg for FM, and 702mg for IS for patients prescribed 800-1000mg.
Among pregnant women with IDA, the average hemoglobin increase was 1.2 g/dL. Symptom relief (shortness of breath, fatigue, or ice craving/ice chewing), was reported in 76% of women with IDWA and 82% of women with IDA. Infusion reactions, including CARPA reactions, occurred in 3.3% (7.5% for FDI, 3.9% for FM, and 0.8% for IS). Post-infusion discomfort symptoms including tiredness, headache, low back pain, leg swelling, or shortness of breath, occurred in 16.6% (7.8% for FDI, 15.2% for FM, and 22.2% for IS).
Conclusion: High dose iron infusions are effective, safe, and well-tolerated in pregnant women. In a large cohort study, symptom relief was found to be common and comparable for those with IDWA or IDA. Infusion reactions were rare, though they occurred more frequently with both FDI and FM compared to IS. Fewer post-infusion discomfort symptoms were observed after both FDI and FM than IS. Patients receiving IS were less likely to complete their 4-5 prescribed doses, maybe because of more frequent discomfort symptoms and multiple infusion sessions. Overall, the benefits of high dose iron infusions in pregnant women with IDWA or IDA outweigh the risks.

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