

We aimed to determine the incidence of IDA and to examine the effectiveness of parenteral iron replacement in patients receiving HPN” Hwa et al (2015).

Reference:

Hwa, Y.L., Rashtak, S., Kelly, D.G. and Murray, J.A. (2015) Iron Deficiency in Long-term Parenteral Nutrition Therapy. JPEN. May 13th. .

Abstract:

**Background:** Iron is not routinely added to parenteral nutrition (PN) formulations in the United States because of the risk of anaphylaxis and concerns about incompatibilities. Studies have shown that iron dextran in non-lipid-containing PN solutions is safe. Data are limited on iron status, prevalence of iron deficiency anemia (IDA), and efficacy of intravenous iron infusion in long-term home PN (HPN). We aimed to determine the incidence of IDA and to examine the effectiveness of parenteral iron replacement in patients receiving HPN.

**Methods:** Medical records of patients receiving HPN at the Mayo Clinic from 1977 to 2010 were reviewed. Diagnoses, time to IDA development, and hemoglobin, ferritin, and mean corpuscular volume (MCV) values were extracted. Response of iron indices to intravenous iron replacement was investigated.

**Results:** Of 185 patients (122 women), 60 (32.4%) were iron deficient. Five patients were iron deficient, and 18 had unknown iron status before HPN. Of 93 patients who had sufficient iron storage, 37 had IDA development after a mean of 27.2 months (range, 2-149 months) of therapy. Iron was replaced by adding maintenance iron dextran to PN or by therapeutic iron infusion. Patients with both replacement methods had significant improvement in iron status. With intravenous iron replacement, mean ferritin increased from 10.9 to 107.6 mcg/L ( $P < .0001$ ); mean hemoglobin increased from 11.0 to 12.5 g/dL ( $P = .0001$ ); and mean MCV increased from 84.5 to 89.0 fL ( $P = .007$ ).

**Conclusions:** Patients receiving HPN are susceptible to IDA. Iron supplementation should be addressed for patients who rely on PN.

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