Lactoferrin plus health education versus total dose infusion (TDI) of low-molecular weight (LMW) iron dextran for treating iron deficiency anemia (IDA) in pregnancy: a randomized controlled trial

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Abstract:

Background: Iron deficiency anemia (IDA) is one of the most common medical disorder disturbing pregnancies particularly in low resources countries, and contributes significantly to morbidities and mortalities. Thus, early diagnosis and prompt management of IDA is highly recommended. Aim: To Test the efficacy and safety of oral lactoferrin plus health education provided by a nurse versus total dose infusion (TDI) of low-molecular weight (LMW) iron dextran for treating IDA in the second and third trimester of pregnancy. Design: A prospective interventional, randomized, parallel-group, single-center longitudinal study. Setting: Woman's Health Assiut University Hospital, Assiut, Egypt, at the outpatient clinic and inpatient unit. It comprised 120 cases divided into two groups as pineapple flavored lactoferrin oral sachets 100mg twice daily with health education (group A) and TDI of LMW iron dextran (group B). Main outcome measures: The primary efficacy parameter was clinical improvement and the amount of increase in hemoglobin concentration by 4 weeks after therapy, secondary outcome measures included measurement of the rest of RBC, and iron indices, the adverse effects related to iron therapy and the patient compliance to the treatment. Results: There was insignificant difference between both groups regarding sociodemographic data, parity and mean gestational age. Both groups showed a significant clinical improvement of anemia 4 weeks post-therapy. There was no statistically significant difference in mean Hb level improvement in both groups after 1 month of therapy. However, mean corpuscular volume (MCV) and mean corpuscular hemoglobin (MCH) improved significantly more in group B than A while iron indices (serum iron and serum ferritin) were significantly more in group A than group B. Conclusions: Pineapple flavored lactoferrin oral sachets plus health education can be widely used as an alternative to TDI iron dextran supplementation due to clinical as well as laboratory improvement of IDA during pregnancy after 1 month of treatment. Proper health education of the pregnant women with nurse recommendations of balanced diet containing good sources of iron would increase awareness of pregnant women and help eradicate IDA with its serious sequel during pregnancy.

Keywords:

Iron deficiency anemia; lactoferrin; low molecular weight iron dextran; nursing; pregnancy; total dose infusion

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