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Ferrous bisglycinate 25 mg iron is as effective as ferrous sulfate 50 mg iron in the prophylaxis of iron deficiency and anemia during pregnancy in a randomized trial.

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Abstract

OBJECTIVE:

To compare the effects of oral ferrous bisglycinate 25 mg iron/day vs. ferrous sulfate 50 mg iron/day in the prevention of iron deficiency (ID) and iron deficiency anemia (IDA) in pregnant women. Design: Randomized, double-blind, intention-to-treat study. Setting: Antenatal care clinic. Sample: 80 healthy ethnic Danish pregnant women.

METHODS:

Women were allocated to ferrous bisglycinate 25 mg elemental iron (Aminojern®) (n=40) or ferrous sulfate 50 mg elemental iron (n=40) from 15 to 19 weeks of gestation to delivery. Hematological status (hemoglobin, red blood cell indices) and iron status (plasma iron, plasma transferrin, plasma transferrin saturation, plasma ferritin) were measured at 15-19 weeks (baseline), 27-28 weeks and 36-37 weeks of gestation. Main outcome measures: Occurrence of ID (ferritin <15 µg/L) and IDA (ferritin <12 µg/L and hemoglobin <110 g/L).

RESULTS:

At inclusion, there were no significant differences between the bisglycinate and sulfate group concerning hematological status and iron status. The frequencies of ID and IDA were low and not significantly different in the two iron groups. The frequency of gastrointestinal complaints was lower in the bisglycinate than in the sulfate group (P=0.001). Newborns weight was slightly higher in the bisglycinate vs. the sulfate group (3601±517 g vs. 3395±426 g, P=0.09).

CONCLUSIONS:

In the prevention of ID and IDA, ferrous bisglycinate was not inferior to ferrous sulfate. Ferrous bisglycinate in a low dose of 25 mg iron/day appears to be adequate to prevent IDA in more than 95% of Danish women during pregnancy and postpartum.