

Comparative Study of Effect of Calcium on Iron Absorption of Controlled Release Iron Preparation in Iron Deficiency Anaemia in Pregnancy

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Abstract

Background: Iron deficiency anaemia in pregnancy is a global health problem. To manage this iron supplementation along with other nutrients such as calcium are advised during pregnancy. But the possibility of calcium inhibiting iron absorption always remain. Moreover, iron has its own gastrointestinal adverse effects which discourage its use. In the present study, the effect of controlled-release and conventional iron preparation supplementation were compared for absorption and gastrointestinal adverse effects. **Materials & Methods:** A total of 72 pregnant patients in their second trimester of pregnancy participated in the study. They were divided into 2 groups. Group A received controlled release preparation of iron, calcium and folic acid while conventional preparation of iron, calcium and folic acid were given to group B. Haematological parameters were assessed at baseline (day 0), day 30, day 60 and day 90. **Results:** Initially inhibitory response of calcium on iron absorption was seen but it was lost gradually. Significantly lesser gastrointestinal adverse effects were observed in group A. **Conclusion:** There is a clear need for a combination iron-calcium supplement which delivers bioavailable iron with lesser degree of gastrointestinal adverse effects.