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 **Original article:**

**Evaluation of efficacy and tolerability of iron sucrose and iron dextran in chronic renal failure patients in a tertiary care teaching hospital**

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**Abstract**

**Objective:** To compare of efficacy and safety of iron sucrose and iron dextran in chronic renal failure patients in a tertiary care teaching hospital

**Methods:** It was an observational and prospective study in chronic renal failure patients at a tertiary care teaching hospital, who were treated with different parenteral iron preparations. The patients were followed up every 4 weeks for 3 months and observed for clinical and hematological improvement and adverse effects. Improvements in the hematological parameters and serum ferritin, with iron sucrose treated patients were compared with historical control groups of different iron preparations. The data was analyzed using paired t-test, unpaired t-test and fisher`s exact test.

**Results:** Total 48 iron sucrose treated patients were compared with historical control group of iron dextran treated 57 CRF patients. Iron sucrose and iron dextran significantly (P<0.05) improved mean hemoglobin, anemia indices and serum ferritin at the end of study. Mean increased in hemoglobin from baseline was 4.7 g/dL with iron sucrose (at 12 weeks) and 2.4 g/dL with iron dextran (at 6 weeks). Mean improvement in MCV and MCH were 8.3 μm3 and 3.5 pg/cell with iron sucrose (at 12 weeks) and 6.2 μm3 with iron dextran (at 6 weeks) respectively. At 12 weeks, mean increases in serum ferritin was 220.5 ng/ml with iron sucrose treated patients of CRF) as compared to 290.5 ng/ml with iron dextran (at 6 weeks). ADRs were more in patients treated with iron dextran (170.1%) as compared to iron sucrose (58.3%).

**Conclusion:** Both parenteral iron preparations improved hemoglobin and anemia indices efficiently, however, iron sucrose was more efficacious and well tolerated by patients.

**Key words:** parenteral iron preparation, chronic renal failure, iron sucrose, iron dextran