

## ABSTRACT

### HEMOGLOBIN RESPONSE TO INTRAVENOUS IRON THERAPY IN NONDIALYTIC CHRONIC KIDNEY DISEASE PATIENTS WITH ANEMIA

**Objectives:** The purpose of this study is to analyze the hemoglobin response one month after one gram of injection iron sucrose IV and also to analyze whether the iron indices alone or in combination predict the hemoglobin response.

**Background:** Anemia is a common complication of CKD patients. Anemia increases cardio vascular morbidity and mortality. Treatment of anemia in predialytic patients reduces cardio vascular morbidity and mortality. Here we assess the hemoglobin response in non dialytic CKD patients with anemia.

**Methods:** We treated fifty newly detected CKD patients with anemia with ten doses of injection iron sucrose IV daily. Three patients developed minor adverse reactions (rigors, itching). They were withdrawn from the study. Two patients discontinued due to personal reasons. Five patients did not turn up for follow up in spite of many reminders. In the end 40 patients were analyzed regarding hemoglobin response and the correlation between iron indices response and hemoglobin response.

**Results:** There was a mean hemoglobin increase of 0.8125 g/dl one month after ten doses of injection iron sucrose. There were significant increases in serum iron and TSAT. But there was no significant increase in serum ferritin. There were no correlations between serum ferritin and TSAT response with hemoglobin response. There were significant correlations between hemoglobin response and pretreatment serum ferritin and TSAT levels. But there were no correlations between hemoglobin response and pretreatment serum iron and TIBC levels. When pretreatment TSAT levels are less than 30% there is good hemoglobin response even if pretreatment serum ferritin levels are more than 500 ng/ml.

**Conclusions:** There is significant correlation between hemoglobin response and pretreatment serum ferritin and pretreatment TSAT levels. Pretreatment TSAT levels less than 20% is the single most predictive factor of hemoglobin response. Hemoglobin, serum ferritin and TSAT responses did not correlate with each other. Intravenous iron sucrose injection has a very good safety profile.