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<sup>1</sup>Assistant Professor, Department of Pharmacy Practice, Krupanidhi College of Pharmacy, Bangalore

<sup>2</sup>Director, Al Shifa College of Pharmacy, Kerala THE EVALUATION AND COMPARISON OF THE EFFICACY AND SAFETY OF FERROUS FUMARATE AND CARBONYL IRON IN PREGNANCY INDUCED IRON DEFICIENCY.

Iron deficiency anemia is the commonest medical disorder to occur in pregnant women affecting around 80% of the pregnant females.

The objective of the study was to compare the efficacy and tolerability of a marketed formulation containing ferrous fumarate and carbonyl iron in the treatment of pregnancy induced ID. This is a prospective study with a total of 300 pregnant females. And they were randomly assigned into two groups of 150 each and were allocated to receive formulation A, LIVOGEN-Z or formulation B, CARBOFER-Z.

The enrolled patients were followed up after every 4 weeks during which their Efficacy evaluation was noted using hemoglobin value and Clinical safety was evaluated based upon the nature and severity of adverse effects.

The response and tolerability to therapy was recorded on a 5-point rating scale using PGART and PGATT. The patients were also given counselling, interventional programs leaflets and thank you form during the study period.

The rise in hemoglobin in the patients receiving a ferrous fumarate preparation was significantly better than that seen in the patients receiving a carbonyl iron preparation.

The adverse reaction was also noted and the ferrous fumarate group showed a significantly better outcome with respect to response to therapy (p<0.0001) as well as tolerability (p=0.002).

Ferrous fumarate is not only significantly superior in efficacy but is better tolerated than carbonyl iron. Ferrous fumarate is safe in pregnancy and gives a good hematological response with minimal adverse effects and can be used for the treatment of iron deficiency during pregnancy.

Keywords: Iron deficiency, Pregnancy, Ferrous fumarate, Carbonyl Iron

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