

Association of Serum Ferritin Levels with Preeclampsia in Pregnant Women

Neetu Kumari

Dr. SS Tania Medical College and Research Center, Sriganganagar, Rajasthan, India

Abstract:

Background: Preeclampsia is a pregnancy-specific hypertensive disorder associated with significant maternal and fetal morbidity and mortality worldwide. Oxidative stress, inflammation, and endothelial dysfunction are considered major contributors to its pathogenesis. Serum ferritin, an acute phase reactant and indicator of iron metabolism, may play an important role in the development and severity of preeclampsia.

Aim: To evaluate and compare serum ferritin levels in preeclamptic pregnant women and normotensive pregnant women.

Materials and Methods: A comparative cross-sectional study was conducted among pregnant women attending the obstetrics and gynaecology department of a tertiary care hospital. The study population consisted of 100 preeclamptic pregnant women and 50 normotensive pregnant women. Venous blood samples were collected under aseptic conditions, and serum ferritin levels were estimated using standard laboratory methods. Statistical analysis was performed to compare serum ferritin levels between the two groups, and a p-value <0.05 was considered statistically significant.

Results: Serum ferritin levels were found to be significantly elevated in preeclamptic pregnant women compared to normotensive pregnant women. Increased ferritin levels showed a positive association with the severity of preeclampsia, indicating enhanced oxidative stress and inflammatory response in affected patients.

Conclusion: Elevated serum ferritin levels in preeclamptic pregnant women suggest its possible role as a biochemical marker in the pathophysiology and severity assessment of preeclampsia. Serum ferritin may be useful as an additional laboratory parameter for early identification and management of high-risk pregnancies.

Keywords:

Preeclampsia, Serum Ferritin, Pregnancy, Oxidative Stress, Biomarkers, Hypertension in Pregnancy.