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**Correlation of serum ferritin level with left ventricular function in  $\beta$ -thalassemia major patients with increased transfusion dependence****Amna Imtiaz**

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Aim of study was to correlate serum ferritin with left ventricular function in beta thalassemia major patients with increased transfusion dependence and to find out whether echocardiography can be used to assess pre-clinical cardiac disease in these patients. 60 patients of beta thalassemia major with increased transfusion dependence were enrolled in this study. Serum ferritin levels of all patients were measured by using indirect Enzyme Linked Immunosorbent Assay (ELISA). Echocardiography was performed on all patients by a consultant cardiologist by linking conventional echocardiography with tissue Doppler imaging. Based on serum ferritin level, patients were divided in to three groups. Group-1 consisted of patients having serum ferritin level equal to or less than 2500 ng/ml. A total of 25 patients were placed in this group. Group-2 included patients having serum ferritin level between 2500 to 5000 ng/ml. A total of 22 patients were placed in this group. Group-3 included patients having serum ferritin level more than 5000 ng/ml. This group consisted of 13 patients. All patients having serum ferritin below 2500 ng/ml had normal systolic function and only 16% of the patients in this group had diastolic dysfunction as reflected by abnormal E/A ratio. In group-2, 27% of the patients had systolic dysfunction reflected by subnormal ejection fraction while 40% of the patients had diastolic dysfunction. In group-3, 62% of the patients had abnormal systolic and diastolic function. Pearson correlation was used to find correlation between serum ferritin and left ventricular function. A strong negative correlation was found which is reflected by a p value of less than 0.05 which is significant. Chi square test is used to correlate serum ferritin with E/A ratio. P value came out to be less than 0.05 which is significant.

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