

An attempt to Detection of Iron Overload and Its Complications in Beta Thalassemia Major Patients at Thalassemia Unit Kurunegala by Investigating Some of the Laboratory Parameters

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Thalassemia is the commonest single gene disorder in Sri Lanka that causes an overwhelming weight of suffering on families and a large financial cost to the health service. The aim of the study was to detect organ related complications of beta thalassemia major patients (β TM) with iron overload and chelated status using some of the laboratory parameters. Patients from age 2-35 years who were diagnosed with β TM (n=68) were selected and obtained Serum Ferritin (SF), Haemoglobin, LFT, RFT and endocrinological records from their BHTs. The data was collected at 6-month intervals for a maximum of 2 1/2 years after treating with iron chelation. Correlations were obtained by analysing SF with other parameters using SPSS version 20. The correlation takes place within the same parameter and between different parameters and the former is prominent. The 6th month value of SF is highly correlated with the 6th month AST ($p=0.02 < 0.05$). As an example, the 6th month AST value is correlated with 12th ($p= 0.032$) and 30th month ($p= 0.020$) of itself. In the same manner, the Serum Creatinine value of 6th month is correlated with 18th ($p= 0.032$) and 12th month ($p=0.000$) itself. In this study, we found an association between SF and AST at 6 months after initial iron chelation therapy. However, prior to implementing the outputs of the laboratory results, an increasing sample size with time duration should be applied. Additionally, more laboratory parameters that are specified for a particular organ should be considered.

Keywords: *thalassemia, serum ferritin, AST, serum creatinine*