

Prevalence of Endocrine Complications in Transfusion-Dependent Beta Thalassaemic Pakistani Patients

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Abstract

Objectives: To investigate the frequency of endocrine complications among β -thalassaemic patients in Pakistan.

Materials and Methods: The current cross sectional study was conducted at the Thalassemia Centre, Islamabad, Pakistan between October 2013 and March 2014. We enrolled 96 β -thalassaemic patients and blood samples were drawn to determine serum calcium, phosphate, ferritin, parathyroid hormone, free T4, thyroid stimulating hormone, 25-hydroxy vitamin D and random blood sugar levels. Comparison of demographic features and serum ferritin levels between patients with endocrine and without endocrine complication was done using logistic regression analysis and odds ratio (OR), 95% confidence interval (CI) and p-values were reported. The level of significant was considered at 5%.

Results: Out of 96, 56 (58.3%) were male patients. The mean (\pm SD) age and ferritin levels of patients was 13.8 (\pm 3.8) years and 4447 (\pm 2945) ng/mL, respectively. Out of 96, 40 (41.7%) patients had endocrine complications β hypoparathyroidism (24.0%), hypothyroidism (13.5%), vitamin D deficiency (3.1%) and diabetes (1.1%). Thalassaemic patients who had higher serum ferritin levels (3000 ng/ml or more) had significantly higher odds of endocrine complications (OR 5.42, p=0.038) compared to those who had low serum ferritin levels (