

## **Abstract**

### Introduction:

Iron overload due to regular transfusions is one of the most troublesome complications of thalassaemia.

### Objectives:

Here we aim to describe body iron status, trends of serum ferritin and associations of optimal body iron control, iron related complications and parental awareness on iron overload among patients with transfusion dependent thalassaemia.

### Design, Setting and Method:

A cross sectional descriptive study was conducted at Paediatric and Adolescent Thalassaemia Centres of Colombo North Teaching Hospital from October to December 2017. All children with transfusion dependent thalassaemia aged 16 years and below attending for blood transfusions were recruited. Data were collected using an interviewer-administered questionnaire by interviewing patients and perusing medical records and analysed using SPSS. Ethical approval was obtained from Ethics Committee of University of Kelaniya.

## Results:

Fifty-four children were recruited; 52% were males. Age groups were; <2 years:3.7%, 2-5 years:9.3%, 6-10 years:29.6% and 11-16 years:57.4%. Majority (80%) were diagnosed with thalassaemia within the first year of life; 83% had  $\beta$ -thalassaemia major while 13% had HbE/ $\beta$ -thalassaemia. Serum ferritin levels were; <1000ng/ml:29.6%, 1000-2499ng/ml:50.0%, 2500-4999ng/ml:16.7% and >4999ng/ml:3.7%. Trend of mean serum ferritin at yearly intervals showed gradual rise until 5 years and plateauing thereafter. Children with serum ferritin <1000ng/ml were diagnosed with thalassaemia at a later age compared to others; 23.6( $\pm$ 38.3) months vs 9.0( $\pm$ 10.8) months;  $p < 0.05$ . Higher family income (>Rs.25000/=) was significantly associated with optimal body iron control (OR-4.81;95%CI1.17-19.67;  $p < 0.05$ ).

## Conclusions:

Mean serum ferritin level gradually rose until 5-years of age and plateaued off in this sample. Optimal body iron control was positively associated with older age at diagnosis of thalassaemia and higher family income.