

**ABSTRACT**

**Compliance and Barriers of Beta-Thalassaemia Patients towards Iron Chelation Therapy in Hospital Keningau, Sabah**

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**Keywords:** thalassaemia,  
compliance, knowledge, factor

**NMRR Research ID:**  
NMRR-18-404-39581

**Introduction:** Long-term survival in beta-thalassaemia major is strongly influenced by adherence to iron chelation therapy. Identifying factors that influence the compliance remains the first step in improving iron chelation therapy. **Objective:** Due to increase in number of non-compliance to iron chelation therapy for patients in Hospital Keningau, Keningau, Sabah, we aim to evaluate the compliance, identify the factors and assess disease knowledge of patients so that preventive measurement can be formulated. **Methodology:** This was a cross-sectional study conducted in Hospital Keningau by a combination of self-administered and interviewer-administered survey. The survey consists of 3 domains – knowledge assessment based on 10 items, identifying factors for non-compliance and compliance to treatment. Percentage of compliance was measured based on amount taken reported by patients over the intended therapy. Association between knowledge and compliance was measured using Pearson's Chi Square. **Results:** A number of 52 patients completed the survey. The average age was  $18 \pm 4.77$  years. The mean knowledge score was 6.15 out of 10. The percentage of compliance to desferrioxamine was  $78.2 \pm 30.2\%$  while for deferiprone it was  $72.4 \pm 32.6\%$ . There were no association between knowledge score and compliance to desferrioxamine ( $p = 0.893$ ) and deferiprone ( $p = 0.874$ ). Lazziness and pain were the main reasons for non-compliance chosen by patients on desferrioxamine

(19.2%) while for deferiprone it was laziness (23.1%) and side effects (19.2%). The poor compliance was reflected on the high average ferritin levels of respondents ( $7573 \pm 5749$ ).

**Conclusion:** Even though most adolescents had knowledge about their disease, it did not affect patients' compliance to therapy. Laziness was the most prominent factor for

non-compliance in adolescents in our study. This might be because iron chelation therapy is usually seen as a hindrance to independence. Thus in order to improve compliances, further study is needed to investigate the association between compliance and the affecting factors identified in our study.