

## **DQS 01 EFFECT OF IRON DEFICIENCY ANAEMIA ON GLYCATED HAEMOGLOBIN LEVELS AMONG TYPE 2 DIABETIC PATIENTS, ATTENDING THE DIABETIC CENTRE, TEACHING HOSPITAL JAFFNA**

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**INTRODUCTION:** Glycated haemoglobin (HbA1c) levels not only depend on blood glucose levels but also on haemoglobin levels, especially in iron deficiency anaemia (IDA) patients. Since the HbA1c is useful to monitor long-term blood glucose levels of diabetes mellitus.

**OBJECTIVES:** The objective of this study was to determine the changes in glycated haemoglobin levels of iron deficiency anaemic type 2 diabetic patients, attending the Diabetic Centre, Teaching Hospital Jaffna.

**METHODS:** This was an analytical cross-sectional study. Thirty IDA Type 2 diabetic patients with good glycaemic control were selected as the case group by using a stratified sampling method and, age and sex-matched thirty diabetic patients without IDA and with good glycaemic control were selected as the control group. Haemoglobin, serum ferritin and HbA1c levels were measured in both groups. Comparisons were made with the independent sample 't' test, Mann-Whitney U test and One-way ANOVA test in IBM SPSS version 25.0. A value of  $p < 0.05$  was considered significant.

**RESULTS:** The mean haemoglobin level of IDA patients [ $9.63 (\pm 1.56)$  g/dl] was significantly ( $p < 0.001$ ) lower than that of the control [ $13.72 (\pm 1.48)$  g/dl]. IDA patients had the mean serum ferritin level (15.50 ng/ml) significantly lower ( $p < 0.001$ ) than that of the control (45.50 ng/ml). The mean HbA1c level of the IDA patients [ $9.07 (\pm 1.84)$  %] was significantly ( $p < 0.001$ ) higher than that of the control [ $6.76 (\pm 0.48)$  %]. The mean HbA1c levels of mild, moderate, and severe IDA patients were  $7.81 (\pm 1.00)$ ,  $9.749 (\pm 0.72)$  and  $12.42 (\pm 1.10)$  % respectively.

**CONCLUSION:** Diabetic patients with IDA have higher HbA1c levels than diabetic patients without IDA. The mean HbA1c level increased as the severity of anaemia increased.