

## ORIGINAL ARTICLE

# Evaluation of Thyroid Profile and Complement ‘C3’ in Metabolic Syndrome

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### ABSTRACT

Diabetes mellitus (DM) is associated with thyroid dysfunction. The aim of this present study was to measure the level of thyroid hormones (FT<sub>3</sub>, FT<sub>4</sub>, TSH), FPG, PPG, HbA1C, Serum C3 in type II diabetic patients of either sex and to assess their clinical presentations and to compare and correlate the findings with males and females. In this study, 177 type II diabetic subjects and 100 healthy control subjects were investigated for FT<sub>3</sub>, FT<sub>4</sub>, and TSH. FPG, PPG, HbA1C, and S. C3 complement were measured as supplementary parameters to predict the immune system. The level of TSH was significantly higher in type II diabetics as compared to control, but FT<sub>3</sub> and FT<sub>4</sub> did not show statistical significance. Significantly higher levels of FPG, PPG, HbA1C, and Serum C3 and were also noted but serum C3 showed a significant increase with some immune dysfunction compared to control subjects. Type II diabetes should undergo regular screening to detect asymptomatic thyroid dysfunction along with complement C3 and other biochemical parameters to improve the quality of life and reduce the complication rate.

**Keywords:** FPG, PPG, FT<sub>3</sub>, FT<sub>4</sub>, TSH, HbA1c, Serum complement C3.

**Abbreviation:** Free triiodothyronine (FT<sub>3</sub>), Free tetraiodothyronine (FT<sub>4</sub>), Thyroid stimulating hormone (TSH), Fasting plasma glucose (FPG), Postprandial plasma glucose (PPG), Glycated Haemoglobin (HbA1c), and Serum C3 complement (S. C3)

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