Open Access
Scientific Reports

Open Access Scientific Reports

Research Article Open Access

*Corresponding author: %LGKDQ &KDQGUD 6DUNDU 6FLHQW
/DERUDWRU\ %,5'(0 %DQJODGHVK ,QVWLWXWH RI
LQ 'LDEHWHV (QGRFULQH DQG 0HWDEROLF 'LVRU
%DQJODGHVK 7HO ELGKDQ#\DKRR FRP

Materials and Methods

Study population

is was a prospective study carried out in the department of Endocrinology, BIRDEM (Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders) - WHO collaborating center for prevention and control of diabetes, Dhaka, Bangladesh during the period of January, 2012 to May 2012.

In this study population consisted of 120 subjects (Age between 18-70 years; and Sex matched) who were divided into two groups: Diabetic 60 subjects (male-30, female-30) and non diabetic 60 subjects (male-30, female-30). Age and sex-matched healthy volunteers without a history of diabetes were considered being control 30 subjects. General health characteristics such as age, sex, smoking status, family status, family history, treatment status and Biophysical characteristics (particularly as related to preference) were investigated by a self-administered questionnaire. All the patients in the diabetic group were con rmed diabetics who previously had fasting plasma glucose levels and plasma glucose at 2 hours of OGTT/ A er breakfast >7.0 mmol/L and >11.0 mmol/L, HbA1C>6.0% and who were receiving treatment such as insulin, Diet, anti-diabetic drug-glybenicide, glucophage, or physical exercise therapy for diabetes mellitus. In addition, none of the subjects had a history of previous thyroid disease.

Laboratory procedure

Consent was taken for each subject and they were requested to fast overnight. Blood samples were collected by venepuncture from patients and control. e samples were allowed to clot and the serum separated by centrifugation at 10,000 rpm for 15 minutes at room temperature. Serum samples were stored at -20°C until tested. Blood samples were treated as follows: - For Free T_4, TSH and lipid estimation 4 ml of blood was taken in a plain test tube and was separated by centrifugation. For glucose estimation 1 ml of blood was placed in a tube containing uoride. For estimation of HbA1C, 1 ml of blood was taken in a separate test tube containing EDTA. e plasma was separated and analyzed within a few hours of collection. Plasma glucose and serum lipids (Triglyceride, Total cholesterol and HDL cholesterol) were measured in the BIRDEM Biochemistry laboratory, Dhaka, by enzymatic method and mentioned brie y. e LDL cholesterol was calculated from observed triglyceride, total cholesterol and HDL cholesterol by using

Table 5 shown, TSH levels were positively correlated with triglyceride (r=0.248*, p<0.05), Cholesterol (r=0.0.292*, p<0.023). On the other hand, free $_4$Tlevels were inversely correlated with Postprandial blood glucose levels (r= 0.260*, p<0.045), Cholesterol (r=-0.310*, p<0.016), HDL (r=-0.324*, p<0.05).

Discussion

It is found that diabetes mellitus may be associated with altered thyroid functions. But this phenomenon has been observed mainly in Type 1 and Type 2 diabetic patients. In Bangladesh a substantial number of young atients. atie5464atie5464at this 4B004400510003>-6<0036002. 7-3 /S2 Td [993gc i/Span <</MCI1 e925.3(But atie5274(

Citation: 6DKD +5 6DUNDU %& .KDQ 6$ 6DQD 1. &KRXGKXU\ 6