Stages of BMI and Glucose Control in Patients with Diabetes VS Diabetes and TB?

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Abstract

Introduction
Diabetes Mellitus is a chronic metabolic diseases presented with hyperglycemia due to insufficiency or resistancy of insulin, has been associated with increased risk of infection with a 3-fold increased risk for the development of active pulmonary tuberculosis. Several factors including hyperglycemia, insulin resistance and indirect effects related to macrophage and lymphocyte function has enhanced susceptibility to tuberculosis in patients with DM. Tuberculosis developed most frequently in patients with poor diabetic control, and others confounding factors like body mass index has been suggested as risk factors in diabetic with tuberculosis.

Aim
To study the relation between Body mass index and glucose control in diabetic vs diabetic with Tuberculosis.

Methods
74 samples diabetes (35 samples were diabetes with TB) were collected from private hospital, private clinics. Tuberculosis was diagnosed with chest Xray, or acid fast bacilli smear of sputum and diabetes was determined with the blood glucose ad random above 140 mg/dl. Body mass index and HbA1C were measured.

Results
From this study we got 74 samples of diabetes, in which 35 samples were with TB, ages were rank from 36 years to 86 years old, with the sex distribution male 56.8% and female 43.2%. The mean age In both group is 59 years old, the mean HbA1c is 7.8 vs 8.87 (p=0.15) with 48.7% vs 37.1% well control and 51.3% vs 62.9% bad control, the mean BMI is 24.6 vs 23.2 (p=0.03) with 61.5 % vs 65.7% normo weight and 38.5 % vs 25.7% over weight and 8.6% underweight.

Conclusions
Stages of BMI showed statistical significant difference between the group of diabetes and diabetes with TB (p=0.03), while glucose control did not showed significant difference.

Keywords: diabetes, tuberculosis, glucose control, body mass index

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