## **COMMENTARY**

# **Diabetes Management**

# Active pulmonary tuberculosis among patients with diabetes

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#### **Description**

Diabetes-related acute and chronic diseases. Diabetic ketoacidosis (DKA), hyperglycaemic hyperosmolar syndrome (HHS), hyperglycaemic diabetic coma, seizures or loss of consciousness, and infections are all examples of acute consequences. Retinopathy (eye disease), nephropathy (kidney disease), neuropathy (nerve disease), and periodontitis (inflammation of the tissue surrounding the tooth) are chronic microvascular complications, whereas cardiovascular disease (circulatory disease), diabetic encephalopathy (brain dysfunction), and diabetic foot are chronic macrovascular complications (foot ulceration and amputation).

Tuberculosis is the most common cause of death due to microbial diseases in the world. Uncontrolled diabetes by weakening the immune system causes the proliferation of tuberculosis bacilli and disease. Diabetes mellitus (DM) is a complex metabolic disorder characterized by high blood sugar levels because the body does not produce enough insulin or the cells do not respond to insulin. This high blood sugar level causes the classic symptoms of frequent urination, and increased thirst and hunger.

The relationship and the merging epidemics of tuberculosis (TB) and diabetes mellitus (DM) in populations with low socioeconomic status have raised concerns among many experts. Low-income countries, such as in Ethiopia, are facing double burden of alarming rise in DM prevalence and the highest burden of TB in the world. The possible link between the two diseases will further complicate the problem and seek special concern.

Several studies have shown that DM increases the risk of TB and that patients with TB have higher rates of DM. Diabetes triples the risk of tuberculosis and is also a risk factor for adverse tuberculosis treatment outcomes, including death. These risks are known to become worse in people living with DM, especially if their blood glucose levels are high.

This is an analytic case control study. radiography of the patients suffering from pulmonary tuberculosis whose diabetics was proven and the same number of radiographies of the patients suffering from just tuberculosis without diabetics (as approved and recorded in the profile of the patients) was collected from tuberculosis center of zabol city and will be delivered to the radiologists with no information about patients and she report chest radiography and finally the bellows findings of diabetic and non-diabetic TB patients from the anatomic position(upper and lower zone of the right and left bellows) existence or not existence of cavitation, nodules, consolidation and pleural involvement are compared to each other. After gathering of the data, using Spss software, descriptive statistics are presented in the form of (frequency, percent) graphs. For the analysis and comparison of the results in diabetic and non-diabetic people, test with 0/05 level of significance is operated.

There are a few studies on the prevalence of pulmonary tuberculosis in patients with diabetes in Iran. TB incidence in the general population is estimated to be 48.5 cases per 100000 individuals in the Sistan and Baluchistan province. According to the present study, the rate of tuberculosis in diabetic patients is significantly higher than the

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general population of different regions of Iran and also higher than the latest global statistics of 140 per 100,000 people. Another study in Iran stated that this rate is 682 per 100,000 people, which is higher than the general population of different regions of Iran and also the latest global statistics on the prevalence of PTB.

A 2004 Hernandez study of 791 Canadian patients with a history of diabetes reported more positive smears than negative smears. In some articles, the role of diabetes in increasing the prevalence of tuberculosis has been confirmed only in pulmonary tuberculosis and has not played a role in extrapulmonary tuberculosis.

The role of diabetes in TB has been discussed in other articles from other Third World countries.

In a study of 506 TB patients and 693 controls in Tanzania, Mugusi found that the prevalence of diabetes in people with tuberculosis was four times higher than in normal people.

According to the results of this study, in the case of patients with Underlying factors of tuberculosis (especially considering the prevalence of diabetes in Iran.

Addiction and Infection HIV (in the case of prolonged fevers without a specific cause, Tuberculosis should be considered. Also more important than that, actions

Prevention and detection of tuberculosis infections is easy . This can be done by performing a tuberculin skin test (5 units). Reach the goal and, if necessary, prescribe isoniazid (or other drugs recommended for prophylaxis).