

TITLE OF ABSTRACT:

Outcomes of sputum positive pulmonary tuberculosis in patients with diabetes mellitus – a prospective observational cohort study

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OBJECTIVES:

This study was conducted to study the cure rates, sputum conversion rates, determinants of treatment outcomes, time to clinical recovery and effects of glycaemic control on treatment outcomes of sputum positive pulmonary tuberculosis in diabetic and non-diabetic patients.

METHODOLOGY:

In this prospective observational cohort study, all diabetic and non - diabetic (NDM) patients with sputum positive tuberculosis were recruited and followed up for a period of six months. Baseline anthropometric data, sputum AFB smear, AFB culture, Gene Xpert, glycosylated Haemoglobin and blood glucose levels were documented. They were followed up at 2 months when sputum AFB smears and blood glucose levels

were repeated. Those with sputum AFB smear positivity were followed up monthly till negative sputum smears were documented. At 6 months sputum AFB smear, AFB culture, Gene Xpert, glycosylated Haemoglobin and blood glucose levels were repeated. Treatment outcomes in terms of time to conversion of Sputum smears, mortality and cure rates were compared between the two groups.

RESULTS:

We recruited 124 patients of which 68 (55%) were diabetics and 56 (45%) were non - diabetics. 11 patients (9%) were sputum positive at 2 months, among whom 6 were diabetics and 5 were NDM. We demonstrated that smoking, Chronic Obstructive Pulmonary Disease, high bacillary load and the presence of fibrocavitary lesions were associated delayed sputum conversion. There was no treatment failure recorded in our study. There was a significant association between the presence of Chronic Kidney Disease, lower albumin levels and mortality in our study population.

CONCLUSIONS:

In this study, we demonstrated that Diabetes was not associated with poor outcomes in patients with pulmonary TB. There was also no association between DM and delayed sputum conversion. We also could not demonstrate any association between poor glycaemic control and delayed sputum conversion or mortality.

KEYWORDS:

Pulmonary Tuberculosis, Diabetes Mellitus, Outcomes