

ABSTRACT

PULMONARY FUNCTION TEST IN TYPE 2 DIABETICS AND NON-DIABETICS- A COMPARATIVE STUDY

Background:

The complications which are associated with type 2 Diabetes mellitus are mostly caused by macro vascular and micro vascular damages. The pulmonary complications of diabetes mellitus have been poorly characterised. The present study has focused on the mechanical aspects of lung dysfunction which are attributable to type 2 Diabetes Mellitus; maximal forced Spiro metric Pulmonary Function Tests (PFTs) like Forced vital capacity (FVC), Forced Expiratory Volume in 1sec (FEV1) and FEV1/FVC % to be specific.

Aims and objectives:

1. To do a comparative study of the PFTs in type 2 diabetics and non-diabetics by using computerised spirometry.
2. To assess the effects of chronic hyperglycaemia on lung functions and pulmonary complications in patients with type 2 diabetes.

Material and Methods:

Spirometry was performed by using a computerised electronic spirometer, on 50 type 2 diabetics who were between 30-50 years of age and on 50 controls (who

were matched for age, sex and BMI). Any person with a H/O smoking or any condition which affected the lung functions, was excluded from the study. The study was a cross sectional and a retrospective study. Data was analyzed and processed with the help of EPI INFO statistical software by using unpaired Student's 't'-test (two-tailed).

Results:

This study clearly showed a statistically significant reduction in FVC, FEV1, in type 2 diabetics as compared to those in the controls. FEV1/FVC% was increased in type 2 diabetics as compared to that in controls and the increase was statistically significant.

Conclusion:

This study concluded that type 2 diabetes adversely affects the mechanical functions of the lung, the pattern of disease being primarily restrictive in nature.