Abstract
Objective: To measure the effects of type I and type 2 diabetes mellitus on the various spirometric pulmonary function tests
Method: This study involved 70 diabetic patients 25 type I and 45 type 2 diabetes mellitus and 45 control group. Type I diabetic patients include 14 men and 11 women, their ages ranging from 17-63 years with their mean 47.12. Type 2 diabetic patients include 26 men and 19 women; their ages ranging from 19-63 years with their mean 51.2. The control group involved 24 men and 21 women, their ages ranging from 13-68 years with their mean 38.78.

The following pulmonary function tests were carried out for the patients and the control: Force Vital Capacity (FVC), Force Expiratory Volume in First Second (FEV1), Force Expiratory Ratio (FEV1/FVC), Force Expiratory Flow (FEF25-75% MMFR) and Peak Expiratory Flow (PEF), with calculation of their percentage of predictive values
Setting: The study was conducted in IbnSena Teaching Hospital Medical Outpatient Clinic and Al-wafa medical center in Mosul and Mosul University Medical Center.

Results: We compare the lung function in type I Diabetes mellitus, type 2 Diabetes mellitus and controls. There were statistically significant differences between the control group and type I diabetes mellitus and type 2 diabetes mellitus during the measurements of FVC%, FEV1/FVC% and MMFR% and measurements of FVC%, FEV1and FEV1/FVC% respectively with statistically significant reductions in their values when compared to controls. To determine the difference between type I and type 2 diabetes mellitus and their effects on the various lung function tests, it indicates that there were no much differences between them apart from the FVC% which favors type I diabetes mellitus over type 2 diabetes mellitus with highly significant P-value. The duration of diabetes in the two groups seem to have no significant effects on the lung function tests values as most of the patients in the sample studied had their diabetes mellitus duration less than 10 years
Conclusion: It is highly recommend that patients with diabetes should have periodic spirometry measurement to assess the extent of impaired pulmonary function. These measures will recognize early stages of pulmonary defect, which will help to lower the morbidity and mortality of diabetes.
Key words: Spirometry, diabetes mellitus various types
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