

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

## البحث العاشر

بحث مشترك. منشور غير مستخلص من رسالة علمية

عنوان البحث :

Pulmonary function changes in diabetic lung.

### **Abstract:**

**Introduction:** Diabetes mellitus is a chronic and debilitating disease. Its complications give rise to micro and macro vascular diseases which affect eyes, kidneys, heart, blood vessels, nerves and also lungs. There may be a relationship between diabetes and reduced lung function, so this study was designed to evaluate the impairment of lung function on spirometry among diabetic patients.

**Objectives:** To study the effect of diabetes mellitus on the evolution of respiratory function parameters.

**Patients and methods:** Hundred subjects were enrolled in the study, 30 patients with type I, another 30 patients with type II and 40 subjects were controls. Mean age was  $42.78 \pm 3.14$  years, 45 were males and 55 were females. Mean HbA1C was  $8.9 \pm 1.1\%$ . 22 patients with diabetes duration from 5 to 10 years, 38 patients with duration of more than 10 years. Spirometric tests were done for all groups by computerized Spirometry with six parameters {Forced vital capacity (FVC), Forced expiratory volume in first second (FEV1), Peak expiratory flow rate (PEFR), Forced expiratory volume in first second to forced vital capacity (FEV1/FVC), Peak expiratory flow rate (FEFR 25–75) and Diffusing capacity for carbon monoxide(DLCO)}.

**Results and conclusion:** There was a predominant reduction in all the Spirometric parameters of diabetic patients toward the restrictive pattern as there was significant deterioration in DLCO in comparison with healthy controls. FVC ( $p < 0.01$ ), and FEV1/FVC% ( $p < 0.001$ ) were significantly lower in type1 diabetic patients in comparison to those of type II. Impairment of lung functions was obvious with a longer duration of diabetes.