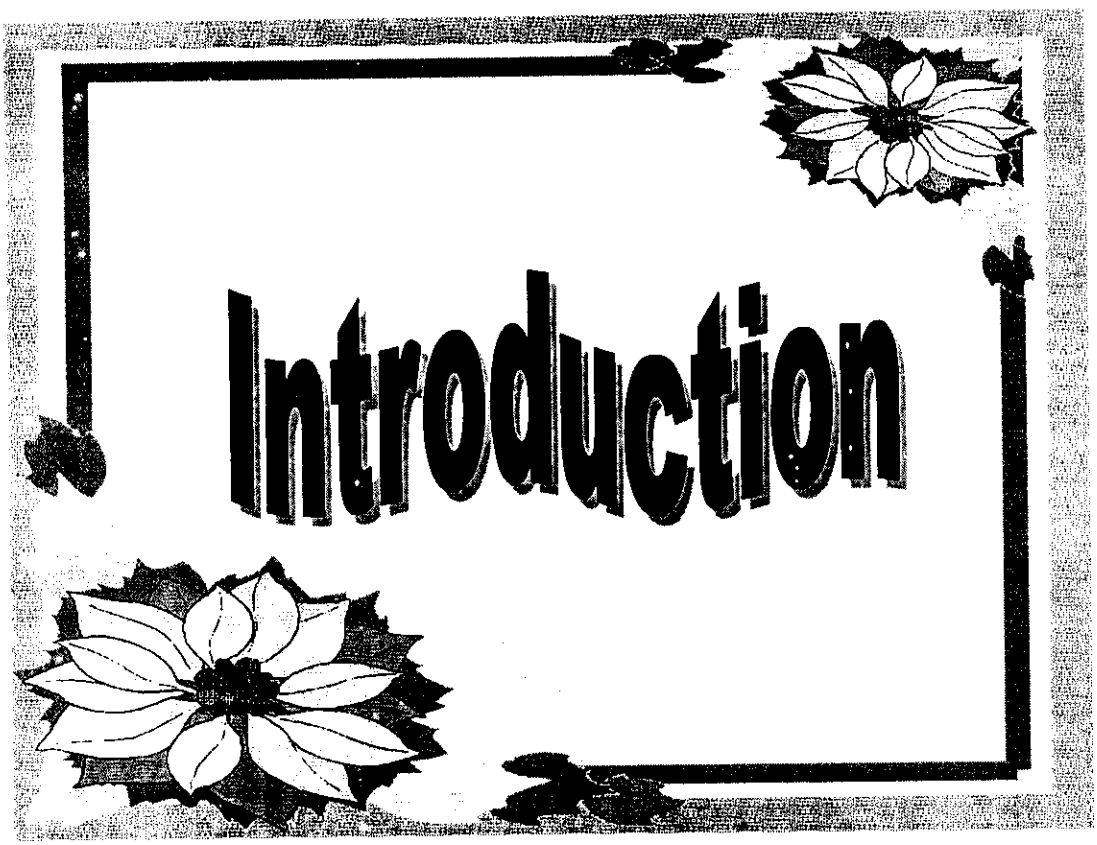
Introduction

INTRODUCTION

Connective tissue diseases are a group of chronic inflammatory disorders that have a variable effect on many different systems and organs *(Dumonde, 1996)*.

This group includes many different diseases, which are: rheumatoid arthritis (RA), systemic lupus erythematosus (SLE), systemic sclerosis (PSS), poly and dermatomyositis (PM/DM), vasculitis and mixed connective tissue disease (MCTD) *(Klippel et al., 1997)*.

These different diseases are sharing common features including the high prevalence of pulmonary system affection by different disorders *(Gabazza et al., 1993)*.

The marked and variable effect of these diseases on the respiratory system,consequently, affect respiratory process and lung functions as well *(Spiro and Isenberg, 1998)*.

Within the connective tissue diseases, rheumatoid arthritis, systemic lupus erythematosus, systemic sclerosis and dermatomyositis show great affection of the respiratory system with variable degrees *(Salaffi et al., 1999)*.

Pulmonary involvement is a well-known extra-articular manifestation of RA and may be a cause of death in RA patients *(Anaya et al., 1995)*.

In SLE, pulmonary involvement represented in more than half of patients with either primary intra-thoracic manifestations (in the pleura,

interstitial lung disease, small airway disease as well as vascular affection), or secondary intra-thoracic atelactasia ***(Kim et al., 2000)***.

Systemic sclerosis shows almost universal impairment of lung functions, it is often clinically silent until later stages of the disease when it may become a major cause of morbidity and mortality ***(Black and DuBois, 1996).***

As regard dermatomyositis, the pulmonary involvement has a high incidence and may lead directly to death in 10% of patients due to the severe ventilatory insufficiency mainly due to muscle weakness ***(Dickey and Myers, 1994).***

Measuring lung properties as volume, ventilatory ability and diffusion capacity provide a relatively accurate and quantitative measure of the degree and extent of lung affection, so PFTs may represent one of the important evaluating measures in CTDs ***(Flaherty and Martinez, 2000)***.

HRCT, which is a special type of the convenient CT, attempts to optimize the demonstration of lung architecture ***(Zerhouni et al., 1995).***

As the morphological changes seen on HRCT have been shown to correlate with pulmonary function status, the analyzed HRCT findings and PFTs results give together a broad prespection for the severity of lung affection as well as the prediction of the prognosis of the disease as well as the effectiveness of drug therapy ***(Tazelar et al., 1990).***


Aim of the work

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The aim of our work is to study the effect of different types of connective tissue diseases on the pulmonary system and to assess the prevalence and the extent of pulmonary functions impairment in these diseases by the use of pulmonary function tests and high – resolution computed tomography.