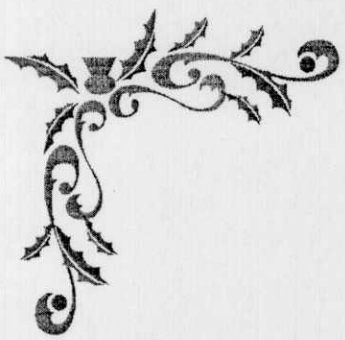
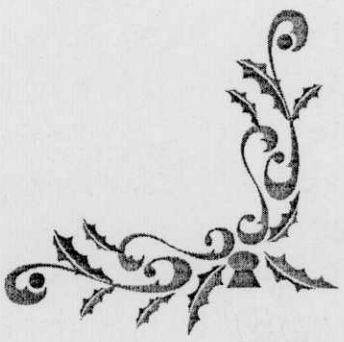


INTRODUCTION



INTRODUCTION

COPD is a worldwide public health problem with significant morbidity and mortality and has been projected to be the 3rd leading cause of total mortality and the 5th leading cause of disability by 2020 **(Murray and Lopez, 2003)**

Chronic Obstructive Pulmonary Disease (COPD) is a preventable and treatable disease with some significant extra pulmonary effects that may contribute to the severity in individual patients. Its pulmonary component is characterized by airflow limitation that is not fully reversible. The airflow limitation is usually both progressive and associated with an abnormal inflammatory response of the lung to noxious particles or gases. **(Gold, 2009)**

An exacerbation of COPD is defined as an event in the natural course of the disease characterized by a change in the patient's baseline dyspnea, cough, and / or sputum that is beyond normal day – to – day variation, is acute in onset, and may warrant a change in regular medication in a patient with underlying COPD **(Burge *et al.*, 2003)**

COPD affects about 10% of the general population, but its prevalence among heavy smokers can reach 50 % **(Cosio *et al.*, 2009)**

It is generally agreed that the main proportion of COPD burden still depends on its high exacerbation rate, which frequently leads to patient hospitalization. **(Dal Negro, 2008)**

Adiponectin is a secretory protein synthesized by adipocytes and has important anti-inflammatory as well as anti-atherosclerotic and anti-obesity effects **(Wouters et al., 2007).**

Adiponectin has a wide range of effects in pathologies with immune and inflammatory components, such as cardiovascular disease, type II diabetes mellitus, metabolic syndrome and rheumatoid arthritis. **(Lago *et al.*, 2007).**