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COPD in elderly patients

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INTRODUCTION

Chronic Obstructive Pulmonary Disease (COPD) is a preventable and treatable respiratory disease which is a major cause of chronic morbidity and mortality throughout the world, representing the fourth leading cause of death in the world [1].

COPD is characterized by persistent airflow limitation that is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases. Exacerbations and comorbidities contribute to the overall severity in individual patients.

COPD prevalence, morbidity, and mortality varies across countries. COPD is the result of cumulative exposures over decades. Often, the prevalence of COPD is directly related to the prevalence of tobacco smoking, although in many countries, outdoor, occupational and indoor air pollution are major COPD risk factors. Globally, the prevalence and burden of COPD are projected to increase in the coming decades due to continued exposure to COPD risk factors and the aging of the population (with more people living longer and therefore expressing the long-term effects of exposure to COPD risk factors) [2 3].

Age is often listed as a risk factor for COPD. Chronic obstructive pulmonary disease (COPD) is common in older people, with an estimated prevalence of 10% in the US population aged > 75 years [4]. It is unclear if healthy aging as such leads to COPD or if age reflects the sum of cumulative exposures throughout life.

DIAGNOSIS

A clinical diagnosis of COPD should be considered in any patient with dyspnoea, chronic cough or sputum production, and a history of exposure to risk factors for the disease.

Spirometry testing is required to confirm the diagnosis and to determine the severity of the disease. Although most older people can perform spirometry adequately [5], some patients may be unable to perform this test (eg, patients with cognitive impairment, with limitations to vigorous respiratory efforts, sedation) [6]. Therefore, in the large majority of patients with dementia, the diagnosis of COPD will need to be made by clinical assessment.

COPD is often accompanied by chronic and age-related diseases, including cardiovascular, metabolic, osteoskeletal and neurological diseases.

Whether these are the consequence of COPD itself and/or they result from shared risk factors and molecular pathways (i.e. multimorbidity) is currently unclear [7-10].

Many age-related diseases, including COPD, are associated with low-grade chronic systemic inflammation "inflammageing" [11 12] and this can be an important pathogenic mechanism of multimorbidity [13].

Many non-communicable diseases, including COPD, are associated with ageing and are often accompanied by other non-communicable diseases (multi-morbidity). The pathogenesis of each of them (including that of the ageing process), as well as their inter-relationships at the molecular, clinical and environmental levels, are extremely complex and dynamic.

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THERAPY

Inhaled medications are the cornerstone for COPD treatment and are typically administered by different types of devices, ie, pressurized metered dose inhalers, dry powder inhalers, and nebulizers. Age-related pulmonary changes may negatively influence the delivery of inhaled medications to the small airways [14].
Physical and cognitive impairment, which are common in elderly patients with COPD, cause difficulties in the use of handheld inhalers in the elderly. Treatment of COPD with inhaled therapy should be customized to each older patient. The selection of inhaler device for these patients should be influenced by their abilities.
There is need to customize both diagnostic and therapeutic procedures for elderly COPD patients to achieve an appropriate disease severity stratification and deliver appropriate treatment.
In this context to achieve an optimal adherence to treatment it is as important to train patients in the use of handheld inhalers and to check that patients are using them correctly on a regular basis as to choose appropriate drugs.

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