Chronic Obstructive Pulmonary Disease in the Elderly

Essam A El-Moselhy and Abdel Hay I Abdel Hay

1Public Health and Community Medicine, Faculty of Medicine, Al-Azhar University, Assuit, Egypt
2Department of Chest Diseases, Faculty of Medicine, Al-Azhar University, Cairo, Egypt

Corresponding author: Essam A El-Moselhy, Professor of Public Health and Community Medicine, Faculty of Medicine, Al-Azhar University, Assuit, Egypt, Tel: 002-01006317065; E-mail: dr_elmoselhy@yahoo.com

Rec date: Oct 10, 2016; Acc date: Oct 12, 2016; Pub date: Oct 14, 2016

Copyright: © 2016 El-Moselhy EA, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Citation: El-Moselhy EA, Hay AHIA (2016) Chronic Obstructive Pulmonary Disease in the Elderly. J Gerontol Geriatr Res 5: e140. doi:10.4172/2167-7182.1000e140

Editorial

Elderly is robustly accompanied with raise prevalence of chronic obstructive pulmonary disease (COPD). Prevalence of COPD in subjects aged 65 years and more is estimated at 14.2% (11.0%-18.0%) in contrast with 9.9% (8.2% to 11.8%) in those aged 40 years or more [1].

Ordinary aging of the respiratory system is linked with reduced static-elastic recoil of the lung, in respiratory muscle effectiveness, and in compliance of the chest wall and respiratory system, result to boost work of breathing in contrast with younger people and reduced respiratory reserve in cases of acute disease, such as heart failure, infection, or airway obstruction. Regardless of these changes, the respiratory system still remains eligible to preserving appropriate gas exchange at rest and in state of effort during the whole lifespan, with only a minor reduce in Pa(O2) and no considerable change in Pa(CO2) [2].

Increasing proof suggests that COPD is a multi-faceted illness comprising more than airflow obstruction. Airflow obstruction has important impacts on function of the heart and gas exchange with many systemic outcomes. Moreover, as COPD is a consequence of inflammation and/or changes in repair mechanisms, the dispersal of inflammatory mediators into the circulation might lead to significant systemic revelations of the illness, as skeletal muscle waste and cachexia. Systemic inflammation may set or get worsen the co-morbid illnesses, as ischemic heart disease, heart failure, anemia, diabetes mellitus, depression, osteoporosis, and lung cancer [3].

Though prevalence of COPD is elevated in the elderly, the illness is predominantly under-diagnosed and under-treated. Diagnosis of COPD is basically depends on physiological airflow restriction using spirometry. Arguments subsist as to the zone of predicted ordinary rates in the elderly, in whom its clinical presentation might be sophisticated by another co-morbidities [4]. The major COPD management fundaments are to evaluate and observe disease severity, minimize risk factors, prevent and manage symptoms, promote health, and raise capability to exercise [5]. Medicament for COPD is mostly introduced using inhalers. The obtainable types of COPD medicament delivery devices are metered-dose inhalers (MDIs), dry powder inhalers (DPFs), and ultrasonic nebulizers [6].

Elderly patients state a particular defiance with respect to selection of the inhaler device. In elderly patients with adequate cognitive function, manual cleverness, and hand power, the most effective factors in inhaler selection are cost reimbursement, device obtainable and suitability, and patient predication. Multiple-dose DPFs present the smooth way of rapid medicament administration, the smooth way of dealing, and integration dose counters [7]. Meanwhile, oral β-agonists are not much efficient than aerosol medicament, however if the elderly is disabled to use any sort of aerosol medicament, then oral β-agents are a choice [6]. Methylxanthines are third-line medicament. The grade of bronchodilation accomplished is tiny and adverse reactions like anorexia, tremors, and insomnia are frequent, even with doses in therapeutic levels. Further, theophylline clearance reduces with progress age and co-morbidities, and medications can change theophylline metabolism [8,9]. Oral corticosteroids had been supposed convenient if the patient is symptomatic despite sufficient aerosol medicament. However, the effects of corticosteroids on lung function are tiny to moderate [10]. Furthermore, the use of corticosteroids for longtime is accompanied with numerous adverse reactions such as osteoporosis, cataracts, diabetes mellitus, Cushing effect, mood disturbances, etc. Therefore, the advantage of oral corticosteroids should be apparent to justify the risk of occurring dangerous adverse reactions [6].

References

1. Halbert RJ, Natoli JL, Gano A, Badamgarav E, Buist AS, et al. (2006) Global burden of COPD: systematic review and meta-analysis. Eur Respir J 28: 523-532.
2. Janssens JP (2005) Aging of the respiratory system: impact on pulmonary function tests and adaptation to exertion. Clin Chest Med 26: 469-484.
3. Barnes PJ, Celli BR (2009) Systemic manifestations and comorbidities of COPD. Eur Respir J, 33(5): 1165-1185.
4. Tayde P, Kumar S (2013) Chronic obstructive pulmonary disease in the elderly: evaluation and management. Asian J Gerontol Geriatr 8: 90-97.
5. Rabe KF, Hud S, Anzueto A, Barnes PJ, Buist SA, et al. (2007) Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. GOLD executive summary. Am J Respir Crit Care Med 176: 532-555.
6. Global Initiative for Chronic Obstructive Lung Disease (2011) Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease.
7. Barrons R, Pegram A, BorriesA (2011) Inhaler device selection: special considerations in elderly patients with chronic obstructive pulmonary disease. Am J Health Syst Pharm 68: 1221-1232.
8. Stewart MJ, Barclay J, Warburton R (1984) Risk of giving intravenous aminophylline to acutely ill patients receiving maintenance treatment with theophylline. Br Med J 288: 450.
9. Upton RA (1991) Pharmacokinetic interactions between theophylline and other medication (Part I). Clin Pharmacokinet 20: 66-80.
10. Weir DC, Gove RI, Robertson AS, Burge PS (1990) Corticosteroid trials in non-asthmatic chronic airflow obstruction: a comparison of oral prednisolone and inhaled beclomethasone dipropionate. Thorax 45: 112-117.