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November 18: World COPD Day 2020. Is it a date to celebrate?

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COPD results from a complex interaction between individual characteristics (genetic predisposition, poor lung development in childhood, aging, and socioeconomic conditions) and exposure to toxic gases and fumes (tobacco smoke, air pollution, and burning of biomass).Current or former smoking remains the major risk factor for COPD.[1]

In recent decades, there has been an increase in both the prevalence of and mortality from COPD. Currently, COPD is identified as the third leading cause of mortality worldwide, accounting for more than three million deaths in 2016 according to WHO data.[2] In Brazil, COPD was ranked the third or fourth leading cause of death in the 2000-2016 period, and there was a downward temporal trend in mortality indicators in all regions, although this trend was stronger in regions with higher socioeconomic indices.[3]

When not fatal, COPD is a major cause of morbidity, which leads to high rates of work absenteeism and early retirement, increased rates of hospitalization, and a consequent increase in disease-related costs. One study showed that, in Brazil, in-hospital morbidity (as defined by number of hospitalizations, length of hospital stay, and hospitalization costs) also decreased, and that this reduction was also more pronounced in regions of greater socioeconomic development.[3]

The treatment of COPD aims to control symptoms, improve quality of life, and reduce exacerbation rates. The use of long-acting bronchodilators is the mainstay of pharmacological treatment, and these drugs are prescribed in accordance with national and international guidelines.[1,4] Whereas there is debate in the literature on whether optimal benefit is achieved by dual or triple therapy, the role of long-acting anticholinergics is well established.[1,5] However, access to these drugs is not uniform throughout Brazil. A study conducted in the state of Bahia[6] showed that most patients diagnosed with COPD did not receive appropriate treatment (83.3% and 63.7%, respectively, according to international and national guidelines), and that more than 50% of the patients did not receive any treatment. Given that the use of long-acting anticholinergics has not been incorporated into the Brazilian Unified Heath Care System in all Brazilian states and that these drugs have not been included in the Brazilian National Ministry of Health clinical protocol and therapeutic guidelines for COPD,[7] the rates of inappropriate treatment can be even higher.

A study conducted in Latin America showed that the COPD underdiagnosis rate can be as high as 4%.[8] If COPD is not clinically suspected by the physician or even by another member of the multidisciplinary team, its diagnosis, treatment, and prevention are compromised. Therefore, Alcântara et al.[9] evaluated the impact that a COPD training program consisting of video classes had on a primary care multidisciplinary team and concluded that the program promoted knowledge acquisition and that this knowledge remained at least three months following the intervention. In addition, the low availability of spirometry in primary care and the physicians' lack of knowledge about the local protocol for dispensing medications are factors that can affect the pharmacological treatment of COPD.[10]

COPD is accompanied by significantly impaired functional exercise capacity, which is caused by airflow obstruction, loss of lean body mass, and, in many cases, hypoxemia. Physical exercise, offered through pulmonary rehabilitation programs, is an important part of treatment.[1,4] The intensity with which the activity is performed is extremely important for the outcome, and the presence of fatigue or dyspnea can prevent the achievement of the objectives. Therefore, studies such as the one by Adolfo et al.,[11] which seek new modalities of physical exercise, are extremely important. In addition, it is important to ensure that COPD patients have access to pulmonary rehabilitation programs.

The use of oxygen therapy is well established and is known to reduce mortality in individuals with resting hypoxemia.[1] Some studies have tried to determine whether patients with exertion-only desaturation or nocturnal desaturation would also benefit from the use of long-term home oxygen therapy.[12,13] Mesquita et al.[12] showed that COPD patients with exertion-only hypoxemia who complied with oxygen therapy had better quality of life scores, but had no improvement in exercise capacity, as measured by six-minute walk distance, or in mortality. A recent study,[13] which would assess the benefit of oxygen therapy for patients with nocturnal desaturation, was discontinued because the minimum number of individuals needed for analysis was not reached and because the recruited individuals had poor treatment adherence.

To date, there have been many advances on pathophysiology, diagnosis, and treatment of COPD. Advances in the fight against smoking and the development of new molecules and inhaler devices have been very important, but we still face a serious problem when it comes to making them available. In Brazil, a continent-sized country with so much inequality, implementing new protocols and revising old ones, all of which containing well-established criteria for dispensing medications, can optimize patient access to treatment. We also need to

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expand patient access to pulmonary rehabilitation programs and understand whether there are benefits to using oxygen therapy in patients other than those with resting hypoxemia. Finally, let us not forget that commitment is required from educational institutions and specialist societies to further the continuing education of non-pulmonologists so that COPD can be diagnosed earlier and earlier. World COPD Day 2020 is on November 18. So, let's celebrate, but let's not forget that there is still much to be done.

REFERENCES

1. Global Initiative for Chronic Obstructive Lung Disease (GOLD) [homepage on the Internet]. Bethesda: GOLD [cited 2020 Nov 1]. Global Initiative for Chronic Obstructive Lung Disease 2020 Report. Available from: https://goldcopd.org/gold-reports/
2. World Health Organization (WHO) [homepage on the Internet]. Geneva: WHO; [updated 2018 May 24; cited 2020 Nov 1]. The top 10 causes of death. Available from: https://www.who.int/en/news-room/fact-sheets/detail/the-top-10-causes-of-death
3. Gonçalves-Macedo L, Lacerda EM, Markman-Filho B, Lundgren FLC, Luna CF. Trends in morbidity and mortality from COPD in Brazil, 2000 to 2016. J Bras Pneumol. 2019;45(6):e20180402.
4. Fernandes FLA, Cukier A, Camelier AA, Fritscher CC, Costa CHD, Pereira EDB, et al. Recommendations for the pharmacological treatment of COPD: questions and answers. J Bras Pneumol. 2017;43(4):290-301.
5. Pascoe S, Barnes N, Brusselle G, Compton C, Criner GJ, Dransfield MT, et al. Blood eosinophils and treatment response with triple and dual combination therapy in chronic obstructive pulmonary disease: analysis of the IMPACT trial. Lancet Respir Med. 2019;7(9):745-756.
6. Pinto CR, Lemos ACM, Assunção-Costa L, Alcântara AT, Yamamura LLL, Souza GS, et al. Management of COPD within the Brazilian Unified Health Care System in the state of Bahia: an analysis of real-life medication use patterns. J Bras Pneumol. 2019;45(1):e20170194.
7. Brasil. Ministério da Saúde. Protocolo clínico e diretrizes terapêuticas-Doença pulmonar obstrutiva crônica. Brasília: Ministério da Saúde; 2013.
8. Menezes AM, Jardim JR, Pérez-Padilla R, Camelier A, Rosa F, Nascimento O, et al. Prevalence of chronic obstructive pulmonary disease and associated factors: the PLATINO Study in São Paulo, Brazil. Cad Saude Publica. 2005;21(5):1565-1573.
9. Alcântara EC, Corrêa KS, Jardim JR, Rabahi MF. Multidisciplinary education with a focus on COPD in primary health care. J Bras Pneumol. 2019;45(6):e20180230.
10. Carvalho-Pinto RM, Silva ITD, Navacchia LYK, Granja FM, Marques GG, Nery TCDS, et al. Exploratory analysis of requests for authorization to dispense high-cost medication to COPD patients: the São Paulo "protocol". J Bras Pneumol. 2019;45(6):e20180355.
11. Adolfo JR, Dhein W, Sbruzzi G. Intensity of physical exercise and its effect on functional capacity in COPD: systematic review and meta-analysis. J Bras Pneumol. 2019;45(6):e20180011.
12. Mesquita CB, Knaut C, Caram LMO, Ferrari R, Bazan SGZ, Godoy I, et al. Impact of adherence to long-term oxygen therapy on patients with COPD and exertional hypoxemia followed for one year. J Bras Pneumol. 2018;44(5):390-397.
13. Lacasse Y, Sériès F, Corbeil F, Baltzan M, Paradis B, Simão P, et al. Randomized Trial of Nocturnal Oxygen in Chronic Obstructive Pulmonary Disease. N Engl J Med. 2020;383(12):1129-1138.