

process. In selected cases, laparoscopic evaluation may be appropriate when suspecting abdominal tuberculosis, since macroscopic findings can suggest the disease<sup>6</sup> and it is an easier way of performing tissue biopsy. Since our patient did not have any respiratory complaints that would make one suspect tuberculosis, surgery in fact provided the first indications of tuberculosis and the tissue biopsies performed would eventually confirm the diagnosis.

In conclusion, this case emphasizes the need to consider tuberculosis as a differential diagnosis in young patients with constitutional symptoms, even if they have no respiratory complaints.

### Conflicts of interest

The authors have no conflicts of interest to declare.

### Acknowledgements

The authors would like to thank Dr<sup>a</sup> Teresa Gomes, Dr Ricardo Reis and Dr<sup>a</sup> Ana Fernandes for their contribution in this letter.

### References

1. Uygur-Bayramicli O, Dabak G, Dabak R. A clinical dilemma: abdominal tuberculosis. *World J Gastroenterol.* 2003;9:1098–101.
2. Mimidis K, Ritis K, Kartalis G. Peritoneal tuberculosis. *Ann Gastroenterol.* 2005;18:325–9.
3. Demir K, Okten A, Kaymakoglu S, Dincer D, Besirik F, Cevikbas U, et al. Tuberculous peritonitis – reports of 26 cases, detailing diagnostic and therapeutic problems. *Eur J Gastroenterol Hepatol.* 2001;13:581.
4. Chow KM, Chow VC, Hung LC, Wong SM, Szeto CC. Tuberculous peritonitis associated mortality is high among patients waiting for the results of mycobacterial cultures of ascitic fluid samples. *Clin Infect Dis.* 2002;35:409–13.
5. Fillion A, Ortega-Deballon P, Al-Samman S, Briault A, Brigand C, Deguelte S, et al. Abdominal tuberculosis in a low prevalence country. *Med Mal Infect.* 2016;46:140–5.
6. Kılıç MÖ, Sağlam C. Evaluation of forty-nine patients with abdominal tuberculosis. *J Clin Anal Med.* 2016;7:470–4.

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<http://dx.doi.org/10.1016/j.rppnen.2017.02.002>  
2173-5115/

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## COPD: A controversial disease?



COPD is today the most common chronic respiratory disease and a growing cause of worldwide morbidity and mortality, with many cardiovascular, musculoskeletal, metabolic and mental sequelae, some usually referred to as comorbidities. According to some authors, chronic obstructive pulmonary disease is not a disease in the true sense of the word, but a very popular acronym.<sup>2</sup> The defining characteristics of a disease are clinical symptoms and signs, structural abnormalities, function disorders, and causation or etiology,<sup>3</sup> but COPD is a heterogeneous collection of different pathophysiological processes that result in the development of chronic and usually progressive airflow limitation,<sup>4</sup> as defined by GOLD.<sup>5</sup> Poor lung development, excess lung damage, airway remodeling and deficient lung repair are different processes affecting the development and progression of COPD. The Fletcher–Peto curve remains a landmark reference for the natural history of COPD, but because of the heterogeneous nature of the disease, several natural histories are possible, and there may be patients progressing on different natural history trajectories, from slowly progressive to rapidly progressive natural histories.<sup>6</sup> Now we recognize that the term COPD brings together a number of entities with different clinical and pathophysiological features, hence the emphasis given to the great diversity of phenotypes of COPD.<sup>7</sup> This emphasis in COPD phenotypes was born both from the current trend of doing a patient-centered medicine and from the need to understand the disease in its heterogeneity.

COPD is characterized by persistent airway limitation that is not fully reversible and is usually progressive.<sup>8</sup> Obstruction is defined by the GOLD as a post-bronchodilator  $FEV_1/FVC < 0.7$ , but this criterion of obstruction has been increasingly questioned, and because there is currently no consensus about the best criterion to be used in COPD,<sup>9</sup> this remains a matter of continuous debate in literature.<sup>10</sup> Furthermore, even though obstruction is a landmark of the disease, some authors wonder if obstruction does always need to be present in early stages, or if emphysema, in the absence of obstruction, represents COPD.<sup>4</sup> However, in any stage of the disease, and despite obstruction not being fully reversible, bronchodilators remain the cornerstone of the treatment, since they usually cause a significant clinical improvement, even without significantly modifying  $FEV_1$ .<sup>11</sup>

Inflammation plays a central role in the pathogenesis of COPD, and keeps on after smoking cessation, but there still persists the concept of COPD as a steroid-resistant disease.<sup>12</sup> Conflicting with this, clinical evidence shows an effect of inhaled corticosteroids (ICS) on the rate of COPD exacerbations and in quality of life,<sup>13</sup> and consensus was reached regarding the indication of ICS in ACOS and frequent exacerbating phenotypes.<sup>14</sup> ICS have some adverse effects, the increased incidence of pneumonia being the best-documented treatment risk,<sup>15</sup> but, paradoxically, the risk of dying is not higher in ICS treated patients. Nevertheless, ICS have been widely used, with more than 70% of COPD patients being treated with ICS,<sup>16</sup> and observational studies have shown the persistence of an excessive use of ICS in

mild COPD. This extensive use is discrepant from treatment guidelines, but the use of ICS in COPD is still an important matter of debate, as is the question of the effects of discontinuation of ICS.

In the general population, the benefits of physical activity are well documented. Physical inactivity is a central problem in COPD patients in all severity stages of the disease, it plays a crucial role in the development of COPD comorbidities and it is the best predictor of all-cause mortality in these patients.<sup>17</sup> Physical activity can be, along with smoking cessation, the best cost-benefit measure to prevent disease progression, comorbidities and mortality. As decreased physical activity is already present early in the development of the disease, the implementation of regular physical activity should be an important secondary prevention strategy. However, GOLD and many other guidelines do not include any recommendations regarding physical activity in COPD, which take into account the physical exercise requirements in relations to duration, frequency and intensity. The recently published ATS/ERS statement,<sup>8</sup> regarding the types of research which will have the greatest impact on patient-centered outcomes in COPD, does not refer to any research recommendation regarding physical exercise, except for pulmonary rehabilitation.

Despite all these controversies, COPD is a disease defined by a function disorder. Although heterogeneous and associated with a chronic inflammatory response in the airways and lungs, COPD is an obstructive disease; the airflow limitation is chronic, not fully reversible and usually progressive. In medical discourse, a disease is a sum of abnormal phenomena that place a living organism in a biological disadvantage, and its defining characteristics may only be pathophysiological.<sup>18</sup> The name of a disease is a conclusion of a diagnostic process, the purpose of which is more to simplify and clarify the medical discourse than to decide a treatment for a given patient. In pulmonary medicine, it is important to distinguish between the connotation of the word obstruction as a function disorder, or a disease like COPD.

## Conflicts of interest

The author has no conflicts of interest to declare.

## References

- Casan P. EPOC, de Dónde Procedemos? *Arch Bronconeumol.* 2004;40:3–5.
- Celli B. Abnormal spirometry confirms airflow limitation but is not the only or most important characteristic of COPD. *Eur Respir J.* 2015;46:1525–6.
- Mannino D, Make B. Is it time to move beyond the “O” in early COPD. *Eur Respir J.* 2015;46:1535–7.
- The Global Initiative for Chronic Obstructive Lung Disease (GOLD); updated 2015. Available from [www.goldcopd.org/upload/users/files/GOLD.Report.2015.Feb18.pdf](http://www.goldcopd.org/upload/users/files/GOLD.Report.2015.Feb18.pdf).
- Rennard S, Vestbo J. Natural histories of chronic obstructive pulmonary disease. *Proc Am Thorac Soc.* 2008;5:878–83.
- Golpe R, López P, Jiménez E, Anón O, Llano L. Distribuição de fenótipos clínicos em pacientes com enfermidade pulmonar obstrutiva crónica por humo de biomassa y por tabaco. *Arch Bronconeumol.* 2014;50:318–24.
- Celli B, Decramer M, Wedzicha J, Wilson K, Agusti A, Criner J, et al. An Official American Thoracic Society/European Respiratory Society statement: research questions in COPD. *Eur Respir J.* 2015;45:879–905.
- Quanger P, Ruppel G, Brusasco V, Pérez-Padilla R, Fragoso C, Culver B, et al. COPD (confusion over proper diagnosis) in the zone of maximum uncertainty. *Eur Respir J.* 2015;46:1523–4.
- Celli B. COPD (confusion over proper diagnosis) in the zone of maximum uncertainty. *Eur Respir J.* 2015;46:1525–6.
- Banuelos J. EPOC: una Obstrucción Fija que se Trata con Broncodilatadores. *Arch Bronconeumol.* 2005;41:3–7.
- Agusti A, Vestbo J. Current controversies and future perspectives in chronic obstructive pulmonary disease. *Am J Respir Crit Care Med.* 2011;184:507–13.
- Agusti A, Vestbo J. Current controversies and future perspectives in chronic obstructive pulmonary disease. *Am J Respir Crit Care Med.* 2011;184:507–13.
- Navarrete B, Casanova C, Miravittles, Lucas P, Riesco J, González-Moro J. Documento de consenso «uso adecuado de los corticoides inhalados en la enfermedad pulmonar obstructiva crónica». *Arch Bronconeumol.* 2015;51:193–8.
- Calverley P. Knowing when to stop: inhaled corticosteroids and COPD. *Eur Respir J.* 2015;46:1236–8.
- Suissa S, Rossi A. Weaning from inhaled corticosteroids in COPD: the evidence. *Eur Respir J.* 2015;46:1232–5.
- Waschki B, Kirsten A, Holz O, Müller K, Meyer T, Watz H, et al. Physical activity is the strongest predictor of all-cause mortality in patients with COPD. A prospective cohort study. *Chest.* 2011;140:331–42.
- Scadding J. Health and disease what can medicine do for philosophy. *J Med Ethics.* 1988;14:118–24.

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<http://dx.doi.org/10.1016/j.rppnen.2016.03.015>  
2173-5115/

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