



Editorial

BODE Index: A Good Quality of Life Marker in Chronic Obstructive Pulmonary Disease Patients[☆]

El índice BODE: un buen marcador de calidad de vida en pacientes con enfermedad pulmonar obstructiva crónica

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Since the introduction of the BODE index a little over a decade ago,¹ our perception of patients with chronic obstructive pulmonary disease (COPD) has changed radically. The one-dimensional view of the condition based solely on the forced respiratory volume in the first second has been replaced by a more comprehensive evaluation of the patient, taking into account other domains of the disease (perceptive, nutritional and exercise capacity). This concept was well received by the scientific community, and both Spanish COPD guidelines (GesEPOC)² and *Global Initiative for chronic Obstructive Lung Disease (GOLD)*³ recommendations now include a multidimensional assessment of the disease.

The main contribution of the BODE index lies in its ability to predict mortality in COPD patients.¹ Over the past few years, numerous studies have reported other benefits, such as its ability to predict hospitalization, adapt to treatments such as pulmonary rehabilitation and volume reduction surgery,⁴ and complement the COPD-morbidity TEst (COTE) index for predicting mortality in COPD patients.⁵

In this edition of *Archivos de Bronconeumología*, Nonato et al. present new evidence on the relationship of the BODE index with health-related quality of life measured using the disease-specific *Saint George's Respiratory Questionnaire* (SGRQ).⁶ To that end, they studied patients with COPD of varying severity from 2 Latin American cities (Santiago de Chile and Sao Paulo). Although this aspect has been explored before, as the authors themselves mention, we believe that this study is important for 3 reasons. Firstly, it includes patients with COPD of varying severity, which most previous studies had not considered. Secondly, it shows the findings from 2 Latin American populations. Thirdly, and more importantly in our opinion, it shows the association between quality of life and individual

BODE scores, noting that even with a BODE score of 0, quality of life in these patients is already impaired.

The BODE group itself has previously published similar results based on the patients in their original cohort.⁴ In that study in 1398 COPD patients, of whom almost 40% were GOLD grades 1 and 2, there was a correlation of 0.58 ($p < .001$) between the BODE index and the total SGRQ score, and 0.59 ($p < .001$) between the BODE index and the SGRQ *Activity* domain. Nonato et al. were able to reproduce these results, albeit with a smaller patient sample, by way of external validation. Similarly, unlike the study by Marín et al.,⁴ dividing the BODE index into individual scores revealed that the quality of life of patients with no multidimensional impairment (BODE 0) is already affected,⁶ complementing what was already known about quartile-based analysis.⁴ This suggests that factors other than those assessed by the BODE index can affect the quality of life of our patients; although these are unlikely to have a direct impact on mortality, they must be identified and corrected. Finally, although the SGRQ is a specific questionnaire for COPD, knowing the score of a non-COPD population with similar demographic characteristics to the BODE 0 sub-group (including comorbidities) could illustrate the real impact of COPD on quality of life.

Similarly, patients in the BODE 0 group reported impaired quality of life in all the domains of the SGRQ, with higher scores in the *Activity* domain. The findings of Nonato et al. are understandable up to a certain point, as limitations in their ability to carry out activities of daily living is more objective for patients than any perception they may have of their symptoms. It is curious that the scores in the *Impact* section were not higher. This domain is considered to cover a wide range of psychosocial problems, and correlates in part with respiratory symptoms and exercise capacity,⁷ although in both the BODE cohort and this study, the correlation was moderate and slight, respectively.

Another interesting aspect is the non-linear association between SGRQ scores and the BODE index, similar to that observed between the SGRQ and GOLD spirometric stages.^{8,9} The sharp increase in SGRQ scores in certain index values is also noteworthy, especially in patients with BODE 0 and BODE 1. Interestingly, some of these changes do not correspond to the limits

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established by the BODE quartiles. The authors' suggestion that this may be due to periods of adaptation up to a critical point seems reasonable.

The evidence presented by Nonato et al. emphasizes that the quality of life of even our asymptomatic or paucisymptomatic COPD patients is already affected, and this deterioration must be identified in order to try to correct it. We must routinely administer questionnaires that assess the quality of life of all our COPD patients, even those with BODE 0. The use of a questionnaire that is easier to administer than the COPD Assessment Test (CAT)¹⁰ could help make this a part of routine clinical practice.

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