the level of control, 77.3% considered it a useful method for diagnosis and 82.9% for determining asthma control. During the meeting itself, an interactive discussion took place among the audience and 5 of the authors of this article (VP, BGC, LME, LPLL and JMO). Controversial aspects associated with FE_{NO} and, primarily, the approach to different clinical cases associated with the usefulness of the technique in the diagnosis and control of asthma were debated. After this discussion, 3 key questions were put to the audience, with several options for response, on which the attendees voted *in situ* at the end of the meeting (Table 1B). The results were even more favorable than those of the earlier questionnaire: 95.2% of the group believed that FE_{NO} was a useful complementary technique in asthma for diagnosis and 90.3% found it useful for determining control (55.3% "in all cases"; plus 35.5% "only in patients with allergic asthma").

In short, the opinion of the multidisciplinary group of stakeholders and experts in asthma attending the AMP-2017 meeting was largely favorable to incorporating the measurement of FE_{NO} in clinical practice. Until the role of this examination is definitively determined in new studies, the results of this discussion should perhaps be considered in future editions of clinical practice guidelines in asthma.

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Does the Impact of Cough on Quality of Life in Bronchiectasis Depend on Prognosis?☆

¿Existe un mayor impacto de la tos en la calidad de vida según el pronóstico de bronquiectasias?

Dear Editor,

The Leicester Cough Questionnaire (LCQ) is a simple instrument comprising 19 questions that measure the impact of cough on quality of life in the last 2 weeks, in 3 domains: physical (8 items), psychological (7 items), and social (4 items). It has been validated in non-cystic fibrosis (non-CF) bronchiectasis (BE) in English by Murray et al.,[1] and in Spanish, a few years ago, by Muñoz et al.[2] No data have been published to date on how the LCQ relates with differences in sex or BE severity according to the FACED and EFACED indices, so we believed it would be of interest to explore these factors.

We conducted a study (Hospital de la Princesa Ethics Committee approval no. PI-828), in which 99 stable patients (no exacerbations for 3 weeks), with a diagnosis on high-resolution computed tomography (HRCT) of non-CF BE according to the criteria of Naidich et al.,[3] were included consecutively over a period of 4 months. The following variables were collected: age, sex, smoking habit, body mass index, dyspnea grade (according to the modified Medical Research Council scale), lung function, chronic bronchial infection (isolation of the same organism in 3 consecutive sputum samples obtained at least 1 month apart), and possible etiology of BE, after completion of the tests recommended by the diagnostic algorithm of the SEPAR Guidelines.[4] BE was classified on HRCT as cylindrical or cystic, and by extent: localized if it affected 1 or 2 lobes, or diffuse if more (taking the lingula as an independent lobe). Patients were evaluated for respiratory exacerbations (need for antibiotic treatments due to increased respiratory symptoms) and hospitalizations for exacerbations in the last 2 years. BE severity was calculated using FACED and EFACED scores.[5,6]

We included 68 women and 31 men, mean age 66.95±15.0 years, with a mean LCQ score (15.67±4.34) indicating cough with a moderate impact on quality of life; mean FACED score: 2.89±1.36; and mean EFACED score: 3.24±1.53. In total, 42.4% and 53.5% were classified as mild; 46.5% and 41.4% as moderate; and 8.1% and 2.0% as severe, according to FACED and EFACED, respectively.

A significant difference was observed when LCQ was analyzed according to sex, with women obtaining worse scores in all domains (Table 1).

A weak-moderate negative correlation was found between EFACED and the total score and all domains of the LCQ, but not for FACED (Table 1). Although the impact of cough increased as BE severity increased, this trend was not significant (Table 1).

In the validation of the Spanish version of the LCQ by Muñoz et al.,[2] BE was classified by severity according to color of expectoration, bacterial colonization, type and extent of BE, volume of sputum, FEV_1, and dyspnea. LCQ was associated with BE severity. In our study, we used the prognostic BE scales, and found a mild-moderate correlation, particularly with EFACED.[5,6] When analyzed by sex, cough was seen to have a greater impact on quality of life in women in all LCQ domains, most markedly in the psychological domain, while BE severity was similar among the sexes. Cough

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Table 1
Measures of Association Between the Leicester Cough Questionnaire, Bronchiectasis Severity, and Sex.

		Leicester Physical	Leicester Psychological	Leicester Social	Overall Score
FACED			**Correlation coefficient/*P*-value**		
	−0.20/0.06		−0.21/0.04	−0.18/0.08	−0.19/0.06
			Mean±SD		
FACED classification	Mild	5.44±1.14	5.51±1.51	5.77±1.24	16.68±3.72
	Moderate	5.09±1.19	5.11±1.49	5.32±1.69	15.08±4.69
	Severe	4.46±1.41	4.48±1.74	4.88±1.63	13.81±4.60
			***P*-value**		
	0.105		0.124	0.283	0.126
EFACED			**Correlation coefficient/*P*-value**		
	−0.26/0.01		−0.28/0.01	−0.23/0.02	−0.25/0.01
			Mean±SD		
EFACED classification	Mild	5.37±1.16	5.48±1.52	5.78±1.26	16.40±3.87
	Moderate	5.02±1.24	4.96±1.52	5.14±1.73	14.91±4.80
	Severe	3.76±0.53	4.00±1.00	4.25±1.77	12.01±3.30
			***P*-value**		
	0.087		0.066	0.136	0.175
			Mean±SD		
SEX	WOMEN	4.99±1.21	4.95±1.57	5.23±1.59	14.87±4.49
	MEN	5.66±1.07	5.88±1.20	6.05±1.13	17.54±3.23
			***P*-value**		
	0.014		0.005	0.011	0.006

Abbreviations: SD: Standard deviation.
Statistical tests: FACED, EFACED+Leicester: Spearman's rho; FACED classification, EFACED classification+Leicester: Kruskal–Wallis H test; Sex+Leicester: Mann–Whitney *U* test.

in BE is frequently associated with expectoration, and it could be postulated that this is less accepted among women, both culturally and socially. It has also been observed in clinical practice that an episode of intense coughing can, in some cases, be accompanied by urinary stress incontinence. This finding regarding LCQ in women is important, and perhaps calls for a deeper investigation into how cough affects quality of life. Some years ago, we reported a greater prevalence of depression among women with BE, and perhaps the greater impact of cough among women as a risk factor for depression worth exploring.[7]

Quality of life questionnaires provide standardized measurements of declining health, and show the gap between expected quality of life and patient-perceived quality of life.[8] In a recently published article, Spinou et al.[9] conducted a systematic analysis of all studies that used quality of life questionnaires in non-CF BE. The LCQ was used in 9 studies. All questionnaires had moderate to good internal consistency and reproducibility, and were more closely associated with subjective measurements such as dyspnea, than with objective measurements such as exercise tolerance, FEV_1, or extent of BE on HRCT.[9]

LCQ is a questionnaire that, while not specifically aimed at BE patients, is simple to use and provides a reliable indication of response to treatment of an exacerbation, optimization, or introduction of a new therapy,[1,2] and would be very useful to implement in standard clinical practice. We used FACED and EFACED scores to classify BE severity, although other systems serve the same function, such as the Bronchiectasis Severity Index (BSI),[10] which includes other variables to create a more complex tool, more oriented toward research or specific clinical cases.

This study has a number of limitations, including the number and characteristics of the patients, who were recruited exclusively from the dedicated clinic of 1 hospital, for which one of the criteria for referral is respiratory exacerbations (>2 annual exacerbations or ≥1 hospitalization). Consequently, we routinely evaluate a large number of patients with BE, which may have led to a prevalence of mild disease among our study population. These findings should be corroborated with future studies conducted in groups with more balanced severity scores.

In conclusion, in our series of BE patients, cough had a moderate impact on quality of life, which was more pronounced in women, and tended to increase in line with more severe BE.

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