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REFERENCE


Do You Speak the Language of Dyspnea?

Language is a symbolic form of communication that enables sharing of ideas, thoughts, and—in the medical setting—symptoms. In school, we are taught that words have specific meanings, and physicians learn that the medical history is most important in establishing a diagnosis of the patient’s complaint. Thus, communicating with patients by asking the right questions becomes essential. For instance, extracting the qualities and characteristics of chest pain is necessary in order to differentiate whether the symptom is due to cardiac ischemia, pleural disease, GI disorder (hiatal hernia with reflux, pancreatitis, cholecystitis, or peptic ulcer disease), or a musculoskeletal problem. In this context, it has become increasingly evident that using descriptors of breathlessness can assist physicians and nurses in understanding the language of dyspnea.

Most of the early efforts at studying dyspnea concerned the exploration of understanding the possible mechanisms contributing to the sensation. In 1966, Comroe1 described six grades or types of breathlessness: awareness of increased ventilation; shortness of breath; deep breathing associated with exercise; hindered breathing; the sensation of suffocating or need for a deep inspiration; and the experience with breathholding. In 1981, Campbell and Guz2 proposed that four sensations—tightness, excessive ventilation, excessive frequency, and breathing difficulty—represented the “elemental sensations” of breathing. However, a more systematic approach to the study of the “language of dyspnea” has only developed within the last decade. Simon et al3,4 asked both healthy subjects and patients with cardiorespiratory disease to select descriptors of breathlessness that most closely matched the sensation experienced by the individual under various conditions. Their findings along with subsequent studies5–7 have demonstrated that the experience of breathlessness encompasses distinct qualitative features.

The study by Hardie and colleagues in this issue of CHEST (see page 935) examined how African Americans and whites used descriptors of breathlessness. Using methacholine to provoke bronchoconstriction in those with a diagnosis of asthma and essentially normal lung function, the investigators found that African-American patients selected more upper airway descriptors (eg, “tight throat”), whereas whites chose lower airway descriptors (eg, “deep breath”) at peak bronchoconstriction. The authors concluded that ethnic/racial differences exist in the language of dyspnea. Is that a surprise? Perhaps not when one considers that whites living in northern New England probably do not use the same words or language to describe an experience, including dyspnea, in a manner similar to those living in the southwestern United States. Do African Americans living in Oakland, California (where the study was performed) use a similar language as do those living in rural Mississippi? Thus, the results of this study by Hardie et al provide an instructive lesson that racial/cultural differences are important to consider in the study of breathing difficulty.

How can the clinician use the language of dyspnea in his/her daily practice? First, prospective use of descriptors of breathlessness may help the physician or nurse identify the specific cause of dyspnea. This approach would be similar to a physician asking a patient with chest pain to describe the qualities and characteristics of discomfort in order to determine the etiology. Certainly, any model for studying the language of dyspnea should be based on a population that is comparable to the individuals being evaluated. Using a descriptor model of breathlessness based on data from 218 patients,8 we have analyzed prospectively the selections of the qualities of breathing difficulty made by 69 patients who were seen in the outpatient clinic for the chief complaint of dyspnea of at least 1 month’s duration. Our preliminary results showed that 30% of patients selected one of the expected descriptors and 44% of patients selected two of the expected descriptors in the model for their specific condition (asthma, COPD, or interstitial lung disease [ILD]). The distribution of scores was greater than expected by chance alone ($\chi^2 = 18.6; p < 0.05$). Of 28 patients with asthma, 50% chose “My chest feels tight” or “My chest is constricted” to describe their breathlessness, whereas none of 22 patients with COPD and only 13% of the 16 patients with ILD selected these descriptors. These findings illustrate the common clinical observation that chest tightness or constrict...
tion is most likely a manifestation of asthma rather than another respiratory disorder.

A second possible clinical use is to distinguish the cause of breathlessness in a patient who has two concurrent cardiorespiratory diseases. For example, a patient with both asthma and ILD may complain of increased breathing difficulty. Although the physical examination and pulmonary function tests are important, a discussion with the patient may differentiate the “tightness” associated with asthma from the “rapid breathing” of ILD. Furthermore, deconditioning is a common development in patients with COPD and may contribute to dyspnea with daily activities. Use of the dyspnea questionnaire may reveal that the patient stops activities due to “heavy breathing” and “breathing more” as expected with deconditioning rather than the increased “work and effort” typical of COPD.

Although there remain many unanswered questions about the experience of breathlessness, we believe that physicians should approach the patient’s complaint of breathing difficulty in a manner similar to the problem of chest pain. We should ask specific questions about the quality, characteristics, onset, and precipitating factors, etc., of breathlessness as part of the standard medical history. We can then become more fluent in the language of dyspnea.

Donald A. Mahler, MD, FCCP
Lebanon, NH
Andrew Harver, PhD
Charlotte, NC

Dr. Mahler is Professor of Medicine, Dartmouth Medical School. Dr. Harver is Associate Professor of Psychology, University of North Carolina at Charlotte.

Correspondence to: Donald A. Mahler, MD, FCCP, Dartmouth Medical School, One Medical Center Dr, Lebanon, NH 03756-0001

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A Doubting Thomas Dealing With Pulmonary Rehabilitation

When I was a young pulmonary fellow, I used to distrust concepts too difficult to define. This simple self-warning led me to underestimate the importance of pulmonary rehabilitation (PR) as a component of the treatment of patients suffering from COPD. As a matter of fact, several panels of experts of different scientific societies dedicated time and spent a considerable amount of effort in defining the process of pulmonary rehabilitation. First was the American College of Chest Physicians Committee on Pulmonary Rehabilitation in 1974, which defined pulmonary rehabilitation “...as an art of medical practice wherein an individually tailored, multidisciplinary program...stabilizes or reverses both the physio- and psychopathology of pulmonary diseases and attempts to return the patient to the highest possible functional capacity...”1 Although this early definition already underlined several fundamental aspects of today’s pulmonary rehabilitation (ie, a consideration of the patient’s individual needs, the multidisciplinarity of the rehabilitation team, the aim of returning the patient to his home setting), this was followed by others that tried to improve it (European Respiratory Society, Rehabilitation and Chronic Care Scientific Group, 19922; National Institute of Health workshop and summary, 1994) which only succeeded in highlighting the educational aspect of PR as “…a multidimensional continuum of services directed to persons with pulmonary disease and their families...”

More recently, a joint panel from the American College of Chest Physicians and the American Association of Cardiovascular and Pulmonary Rehabilitation published evidence-based guidelines on PR, reviewing the current state of the evidence for the scientific basis of PR as a foundation on which to make recommendations for practice. This article showed that, among the components of a comprehensive PR program, the highest grade of evidence (grade A) was achieved for lower-extremities training, with very significant improvement of exercise tolerance. Similarly, among the outcomes used to assess PR programs results, symptoms of dyspnea resulted in a highly significant improvement. Nevertheless, even with a lower grade of evidence, upper