Grading Recommendations

A Matter of Interpretation

To the Editor:

We would like to compliment the authors of the article “Pulmonary Rehabilitation: Joint ACCP/AACVPR Evidence-Based Clinical Practice Guidelines” (May 2007) for their comprehensive review of the literature and their effort to formulate up-to-date, evidence-based recommendations for clinical practice. However, we have concerns about the grading of recommendations concerning upper extremity training (UET) and inspiratory muscle training (IMT). It is surprising to us that the current recommendations grade the quality of evidence for UET as “high” (A), whereas the quality of evidence for IMT is graded as “moderate” (B). Further, it is unclear to us why (unsupported) UET is strongly recommended (grade 1), whereas the use of IMT is not recommended (grade 1). This would mean that the benefits outweigh the burdens for UET, while the opposite is true for IMT. This is, in our opinion, not a balanced summary of the available evidence.

From the studies quoted in the systematic review, it can be concluded that both UET and IMT specifically improve the strength and endurance of the muscle groups that are trained. For both interventions, however, the evidence concerning improvements in health-related quality of life or whole-body functional exercise capacity is either conflicting or absent. In addition, the evidence for both interventions comes from small single-center trials of mostly moderate methodological quality.

Besides the expected benefits and methodological quality of the studies, the burdens of interventions are also taken into account to grade the strengths of recommendations. In the systematic review of the literature, however, no potential burdens are discussed for either IMT or UET.

Consequently, we feel that IMT and UET should both be recommended with the same strength of grading (1B), since the benefits of both IMT and UET should outweigh the burdens for the patients (grade 1) and recommendations can only be based on qualitatively moderate (B) evidence for both interventions (not on high [A] evidence as the guidelines conclude for UET). IMT should in our opinion be recommended for a selected group of patients, probably those with reduced inspiratory muscle strength who experience symptoms of dyspnea during activities of daily living, while UET should probably be recommended for those patients with reduced upper extremity exercise capacity leading to functional limitations in activities of daily living. We hope that our comments will stimulate a debate on the grading of the strength of the recommendations concerning these two specific aspects of exercise training during pulmonary rehabilitation.

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Stenting for Tracheobronchomalacia

Treating Images?

To the Editor:

We read with interest, and some astonishment, the careful study by Ernst and colleagues1 in a recent issue of CHEST (August 2007) on airway stenting for “severe tracheobronchomalacia.” The only function of airway stenting is the palliation of airway narrowing. Airway narrowing is a normal event during expiration, and stenting therefore should be considered only when excessive and/or premature narrowing results in airflow limitation. Whereas Ernst and colleagues, to their credit, made every effort to document airway narrowing, airflow limitation was either poorly documented or not documented at all in their study. Only 42 of the 58 patients underwent pulmonary function tests before stenting, and only 10 patients (17%) underwent both prestenting and poststenting pulmonary function tests; in these10 patients, an absolute (nonsignificant) decrease in the median FEV1 value was documented. Poststenting and pre-stenting and poststenting pulmonary function tests; in these10 patients, an absolute (nonsignificant) decrease in the median FEV1 value was observed. Regarding the “significant” improvements in dyspnea and other quality-of-life scores, their interpretation is delicate as 50 to 60% of patients did not have prestenting and poststenting comparisons and, as the authors acknowledge, there was no control group for these rather subjective values.

From a physiology point of view, the frontier between normal and abnormal narrowing of the central airways is far from established. Even a 90% reduction in the tracheal section at the end of a forced expiration, when the flow in central airways physiologically nears zero, may well be within normal limits. Also, airway narrowing during cough efforts is pivotal to the efficacy of airway clearance, and this might well explain some of the 21 stent obstructions that Ernst and colleagues observed.


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