Review of 2012/BJMMR/2409

Title: Inspiratory and Expiratory Resistances during Exercise.

Thank you for the opportunity to read this paper about inspiratory and expiratory resistance during exercise. I was very excited to read this article because I for years have worked with diagnostics and treatment of exercise induced laryngeal obstruction. Technically, I feel that this article is well written and the results and analyzes in relation to measurements are adequate.

However I was surprised by the level of insight the authors had in relation to exercise-induced laryngeal obstruction. The authors assign symptoms of exercise induced inspiratory symptoms to diagnostic entities that point at abnormalities or dysfunctions of one particular structure of the central airways, to the vocal cords. In most of the literature in this area, diagnoses have not been confirmed with objective test methods. The same applies for causal mechanisms; various explanatory theories are proposed without having performed the studies that are necessary to demonstrate such causal relationship. More recent studies in this area, including from my own research group, shows large variations of findings in patients with apparently similar symptom presentation. Diagnostic heterogeneity requires a clear strategy for diagnostic investigations and therapeutic measures should be based on findings in the individual patient.

With this as a backdrop, it is hard for me to see how resistance measurement outside the mouth can be a tool that can replace visualization of laryngeal structures during symptoms. Transnasal flexible laryngoscopy during exercise is possible, is easy to perform and well tolerated. In our practice, we have performed more than 750 continuous transnasallaryngoscopy exercise tests using treadmill in children and adults (age 5 -
70 years). The Airflow Perturbation Devicegives nodiagnostic contribution explaining the symptom presentation of exercise induced inspiratory stridor, in the way I see things.

I am reluctant to recommend this article to be published in BJMMR. This decision is based on the shortcomings I have pointed out in relation to the diagnostic value of the test. The diagnostic value I consider to be comparable to flow-volume tests. Based on own experience and on the literature on this stage, making a diagnosis of exercise induced laryngeal obstruction on the basis of lung function tests also seems tenuous. One should see the structures involved in the obstruction and study how they respond to increased airflow.

Note: Anonymous Reviewer
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