The Plea for Rigorous Studies on Cough in Children

To the Editor:

Although we applaud Khoshoo et al on performing such a comprehensive series of investigations in these 40 children with chronic cough, as reported in a recent issue of CHEST (September 2009), we have major reservations with their conclusions. In particular, we question the assumption that the improvement in cough (assessed at 8 weeks by parent on a subjective visual analog scale cough score) was caused by the respective interventions. In the absence of a control group, this improvement after 8 weeks could simply be due to a period effect and/or a placebo effect. This is particularly likely when the clinicians have taken such a great interest in the child’s cough and have carried out an elaborate series of investigations. This problem is further exacerbated by the manner in which the subjective nature of their outcome measure was measured. Clearly, given the open nature of the intervention, any assessment of outcome must be objective. This time-period effect with cough was well described in the 1980s by Evald and colleagues. Indeed, the placebo effect is reported to be as high as 80% in cough studies.

Thirty-six children in the study by Khoshoo et al had a nonproductive cough. According to the American College of Chest Physicians (ACCP) and Australian guidelines, in children with nonproductive cough, a “watch, wait, and review” approach should be considered. We have demonstrated that a nonproductive (dry) cough in children spontaneously totally resolves (as opposed to just a reduction in cough score) by 8 weeks in 69%. Unfortunately, Khoshoo et al have also misinterpreted the ACCP guidelines; these do not advocate the use of antibiotics for all children with chronic cough but only those with a productive (wet) cough. Children with wet cough are likely to have protracted bronchitis, as documented in a number of clinical studies, including those using BAL with quantitative bacterial counts.

This study by Khoshoo et al highlights the need for high-quality randomized controlled trials to determine an evidence-based approach to children with chronic cough as we have consistently reiterated. There is always a need to balance any risk of late diagnosis with that of over-servicing. Although the study by Khoshoo et al is interesting, clinicians need to be aware of the major flaws in the methodology used, and the potential for misleading information regarding the best approach to managing children with chronic cough.

Anne B. Chang, MBBS, MPHTM, PhD
Brisbane, QLD, Australia
Lou I. Landau, MBBS, MD
Perth, WA, Australia
Peter P. van Asperen, MBBS, MD
Sydney, NSW, Australia
I. Brent Masters, MBBS, PhD
Brisbane, QLD, Australia
Craig M. Mellis, MBBS, MD
Sydney, NSW, Australia

Affiliations: From the Queensland Children’s Respiratory Centre, Royal Children’s Hospital (Dr Chang and Masters); School of Paediatrics and Child Health, University of Western Australia (Dr Landau); Department of Respiratory Medicine, The Children’s Hospital at Westmead (Dr van Asperen); and Central Clinical School (Dr Mellis), University of Sydney.

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REFERENCE


Response

To the Editor:

The comments by Chang and colleagues are based on their experiences and data generated from a unique population. Although several practitioners can relate to their data, our population, patient selection, methods, investigation protocols, and treatment strategies are somewhat different, and hence the differences. Based on the overwhelming response we have received from pediatricians, family physicians, gastroenterologists, allergists, and pulmonologists from all over the world following the publication of our article, we can confidently state that numerous practitioners worldwide can relate to our data as well. We would like to clarify a few issues so that the readership can understand the differences and interpret the data accordingly.

Definition of Chronic Cough: Chang’s group has used an arbitrary definition of chronic cough (duration >4 weeks). Like most other board-certified pediatric pulmonologists in the United States, we use the >8-week-duration cutoff for chronic cough, similar to the American College of Chest Physicians (ACCP)-recommended definition for adults. Technically, Chang’s group has labeled what we and others call subacute cough (3-8 weeks) as chronic cough (>8 weeks). That is the starting point of the difference. It is then no surprise that their definition has permeated into the recommendations of the ACCP for pediatric cough authored by them. The definition has survived probably because there have been no additional data on the etiology of chronic cough in children. Hopefully, our data will help provide another perspective that the ACCP will consider for future recommendations.

Reason for Referral for Chronic Cough: We, as subspecialists, rarely see subacute cough because the network of our primary care physicians have diagnosed, intervened, and treated infection and other common noninfectious causes before the cough becomes chronic unless there is antibiotic resistance or difficult-to-treat