



Definitions are important and not all wheeze is asthma

Martha Scott, Ramesh J Kurukulaarachy and S Hasan Arshad

Thorax published online September 10, 2010

doi: 10.1136/thx.2010.143941

Updated information and services can be found at:

<http://thorax.bmj.com/content/early/2010/09/10/thx.2010.143941.full.html>

These include:

References

This article cites 5 articles, 2 of which can be accessed free at:

<http://thorax.bmj.com/content/early/2010/09/10/thx.2010.143941.full.html#ref-list-1>

P<P

Published online September 10, 2010 in advance of the print journal.

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

Advance online articles have been peer reviewed and accepted for publication but have not yet appeared in the paper journal (edited, typeset versions may be posted when available prior to final publication). Advance online articles are citable and establish publication priority; they are indexed by PubMed from initial publication. Citations to Advance online articles must include the digital object identifier (DOIs) and date of initial publication.

To order reprints of this article go to:

<http://thorax.bmj.com/cgi/reprintform>

To subscribe to *Thorax* go to:

<http://thorax.bmj.com/subscriptions>

LETTER

Definitions are important and not all wheeze is asthma

We read with great interest the paper by Moncayo *et al*¹ showing a predominance of non-atopic compared with atopic wheeze in children in rural Ecuador. Undoubtedly their study adds to the literature regarding the influence of environmental factors, particularly chronic helminth infections, on wheezing phenotypes. However, we feel that the interpretation and presentation of findings in this paper is open to question. This concern stems from the authors' lack of distinction between wheeze and asthma. While the analysis focused predominantly on current wheeze, subsequent discussion (and, indeed, the title) presents this as asthma.

There is good evidence for the validity of a questionnaire-based definition of asthma.² Our understanding of the definition of asthma used in this paper was of a positive response to 'wheeze in the last 12 months'. Yet wheeze may not necessarily reflect asthma, particularly in childhood where both acute infection and chronic illness might be associated with wheeze. Using only one symptom therefore runs the risk of poor discriminatory value between asthma and other causes of wheeze, making this definition of asthma potentially problematic.³

Relying on 'current wheeze' to represent asthma may also exclude a substantial

proportion of 'ever wheezed' subjects, given the heterogeneous nature of childhood wheeze⁴ and the relapsing and remitting course it may run.⁵ There is therefore an additional risk of misclassification where subjects with asthma who were currently asymptomatic are regarded as non-asthmatic. Given that the stated principal aim of this study was to investigate risk factors for asthma/wheeze, exclusion of those without current symptoms potentially provides an incomplete picture of risk, especially when one considers that 'ever wheezing' has been shown to be a superior predictor of lifetime asthma diagnosis.⁵

Ultimately, asthma is a clinical diagnosis and no questionnaire-based definition can be all-encompassing. Since none of the children in this study were on regular asthma medication, perhaps combining current wheeze with the number of wheezing episodes and including a variable of 'ever wheeze' in the diagnostic criteria might have better selected participants with a greater likelihood of asthma.

In summary, we feel that the distinction between asthma and wheeze is important to recognise and this paper fails to clearly acknowledge this. Finally, we thank the authors for describing some of our previous findings from the Isle of Wight Birth Cohort,⁴ but wish to clarify that those findings related to atopic/non-atopic wheeze and not asthma as they suggest in the introduction to their paper.

Martha Scott,^{1,2} Ramesh J Kurukulaaratchy,^{1,2} S Hasan Arshad^{1,2}

¹The David Hide Asthma and Allergy Research Centre, St Mary's Hospital, Newport, Isle of Wight, UK; ²School of Medicine, University of Southampton, Southampton, UK

Competing interests None.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 6 August 2010

Thorax 2010;■:1.

doi:10.1136/thx.2010.143941

REFERENCES

1. **Moncayo AL**, Vaca M, Oviedo G, *et al*. Risk factors for atopic and non-atopic asthma in a rural area of Ecuador. *Thorax* 2010;**65**:409–16.
2. **Jenkins MA**, Clark J, Carlin J, *et al*. Validation of questionnaire and bronchial hyperresponsiveness against respiratory physician assessment in the diagnosis of asthma. *Int J Epidemiol* 1996;**25**:609–16.
3. **Lukrafka JL**, Fuchs SC, Moreira LB, *et al*. Performance of the ISAAC questionnaire to establish the prevalence of asthma in adolescents: a population-based study. *J Asthma* 2010;**47**:166–9.
4. **Kurukulaaratchy RJ**, Fenn MH, Waterhouse LM, *et al*. Characterization of wheezing phenotypes in the first 10 years of life. *Clin Exp Allergy* 2003;**33**:573–8.
5. **Piippo-Savolainen E**, Korppi M. Wheezy babies-wheezy adults? Review on long-term outcome until adulthood after early childhood wheezing. *Acta Paediatr* 2008;**97**:5–11.