Chronic suppurative lung disease and bronchiectasis in children and adults in Australia and New Zealand

David S Gillis and D Sean Riminton

To the Editor: We view with concern the listed minimum investigations for chronic suppurative lung disease and bronchiectasis in children and adults recommended in the position statement from the Thoracic Society of Australia and New Zealand and the Australian Lung Foundation, published in the Journal.[1] We do not agree with the inclusion of measurement of IgG subclasses in the list.

Interpretation of IgG subclasses is fraught with difficulties.[2] It is unclear whether the isolated finding of low levels of one or more IgG subclasses is a risk factor for developing severe recurrent bacterial infections. Individuals with complete absence of IgG subclasses due to gene deletions may remain entirely asymptomatic, and the finding of a low or absent response to specific bacterial protein and/or polysaccharide is more closely associated with propensity to infection. In addition, the lack of reproducibility of IgG subclass assays and lack of well standardised age-specific reference ranges hinder interpretation of results.

Of major concern is the lack of evidence to provide clear guidance on the efficacy of immunoglobulin replacement therapy in IgG subclass deficiency. In general, the finding of isolated IgG subclass deficiency is not sufficient grounds for commencement of immunoglobulin therapy and is not recommended as an indication for intravenous immunoglobulin therapy in the current Australian guidelines.[2]

We urge the authors to reconsider the inclusion of IgG subclasses in the list of minimum investigations for chronic suppurative lung disease and bronchiectasis.

David S Gillis, Clinical Immunologist[1]
D Sean Riminton, Clinical Immunologist[2]
1 Pathology Queensland, Brisbane, QLD.
2 Concord Hospital, Sydney, NSW.
david.gillis@health.qld.gov.au

1 Chang AB, Bell SC, Byrnes CA, et al. Chronic suppurative lung disease and bronchiectasis in children and adults in Australia and New Zealand. A position statement from the Thoracic Society of Australia and New Zealand and the Australian Lung Foundation. *Med J Aust* 2010; 193: 356-365.
2 Asia Pacific Immunoglobulins in Immunology Expert Group. Consensus recommendations for the use of immunoglobulin replacement therapy in immune deficiency. 2nd ed. Melbourne: APIIEG, 2009: 30-31. ❑

Anne B Chang*

In reply: We thank Gillis and Riminton for their comments highlighting the inclusion of IgG subclasses in the list of suggested investigations when reviewing a patient with chronic suppurative lung disease or bronchiectasis.

We agree that a finding of one or more low IgG subclasses in isolation is not an indication for immunoglobulin therapy and that interpretation of serum IgG subclass concentrations is difficult. Indeed, this was debated at length by the position statement authors. However, after considerable discussion, we decided that measurement of IgG subclasses should be included. Although the data are weak, it is an important area of possible aetiology, and there are varying opinions regarding associations with impaired adaptive immunity.[1-3] As with some other investigations, an abnormal test result in the context of a child or adult with suppurative lung disease would lead to discussion with an appropriate subspecialist for advice on interpretation and/or further evaluation.

Space limitations in the Journal version of our position statement did not permit us to elaborate further.[4] In the full document available online,[5] we stated that:

> The benefits of performing IgG subclasses in isolation are particularly controversial as the role of a reduction of a subclass is likely over-diagnosed.[88-91] If IgG subclass is low, assessment of response to vaccinations is advocated.

Competing interests: See original article for authors' competing interests.[4]

Anne B Chang, Paediatric Respiratory Physician,[1] and Head[2]
* On behalf of the authors.[4]
1 Royal Children's Hospital and Queensland Children's Medical Research Institute, University of Queensland, Brisbane, QLD.
2 Child Health Division, Menzies School of Health Research, Charles Darwin University, Darwin, NT.
annechang@ausdoctors.net

1 King PT, Hutchinson P, Holmes PW, et al. Assessing immune function in adult bronchiectasis. *Clin Exp Immunol* 2006; 144: 440-446.
2 DeBaets F, Kint J, Pauwels R, Leroy J. IgG subclass deficiency in children with recurrent bronchitis. *Eur J Pediatr* 1992; 151: 274-278.
3 Kutukculer N, Karaca NE, Demircioglu O, Aksu G. Increases in serum immunoglobulins to age-related normal levels in children with IgA and/or IgG subclass deficiency. *Pediatr Allergy Immunol* 2007; 18: 167-173.
4 Chang AB, Bell SC, Byrnes CA, et al. Chronic suppurative lung disease and bronchiectasis in children and adults in Australia and New Zealand. A position statement from the Thoracic Society of Australia and New Zealand and the Australian Lung Foundation. *Med J Aust* 2010; 193: 356-365.
5 Chang AB, Bell SC, Byrnes CA, et al. Chronic suppurative lung disease and bronchiectasis in children and adults in Australia and New Zealand. A position statement from the Thoracic Society of Australia and New Zealand and the Australian Lung Foundation. http://www.lungfoundation.com.au/professional-resources/guidelines/chronic-suppurative-lung-diseaseanz-2010 (accessed Dec 2010). ❑