Pseudo-steroid resistant asthma

The report by Thomas et al of patients whose symptoms masquerade as asthma is to be welcomed, although it is not clear how the authors selected their patients from all those referred to their clinic with “true” steroid resistant asthma. In addition, the opportunity has not been taken to determine what proportion of these patients would have fulfilled the criteria for type 1 brittle asthma. In a recent review of brittle asthma I discussed, along with one of the authors of this report, factors such as gastrooesophageal reflux, psychosocial aspects, sleep apnoea, and hyperventilation/vocal cord adduction as contributory or coincident factors, and in that review we put in a plea for future studies to try to characterise phenotypically patients at the severe end of the spectrum compared with other phenotypes or genotypes.

In our patients with brittle asthma hyperventilation is common and I agree that it can be difficult to discern between pure hyperventilation and hyperventilation on a background of pre-existing asthma. The authors describe a hyperventilation test but it is perhaps surprising that they have not reported which test they used nor what objective measures were made. The tendency to hyperventilate commonly overlaps with the difficult area of psychosocial aspects in severe asthma.1 The authors misquote our paper2 in that we did not, in that study, compare severe asthma with another chronic disease group. Equally, the authors have not read our second paper which describes the psychosocial impact was greater. This study also provided evidence of unusual self management strategies in this group which, in many cases, led to delay in starting or increasing oral steroids. The authors of this report have not attempted to correlate the well established indices of psychosocial burden—including assessment of panic/fear/anxiety—with hyperventilation, and this would have been both helpful and interesting. Vocal cord adduction is also difficult to verify as it is a diagnosis usually made, as here, on clinical grounds, although video recording the vocal cords during an episode is as here, on clinical grounds, although video recording the vocal cords during an episode is a particularly sensitive test and duration of required ventilation can be used to assess the degree of airway resistance and the reversibility of it at the time of ventilation. Low pressures and a short period of ventilation are indicators that the episode was not primarily severe bronchoconstriction (as presumably clinically perceived at the time), and is a major clue to the underlying functional aetiology of the problem (either vocal cord dysfunction or pseudo-severe asthma).3 High inflation pressure or a prolonged period of ventilation suggest that there is severe airways obstruction and any associated functional disease is superimposed.

This leads on to the next point—namely, that severe asthma and vocal cord dysfunction/hyperventilation may, and frequently do, co-exist. Bronchoscopic examination may help to identify those patients who have significant underlying inflammatory disease of the airways, but the sensitivity and specificity of lavage and biopsy material has not been evaluated in patients with severe asthma on steroid therapy. In addition, the identification of vocal cord dysfunction and/or hyperventilation does not necessarily result in a successful withdrawal of steroids and, indeed, inappropriately rapid or unsupervised withdrawal of treatment may have catastrophic results if severe asthma and vocal cord dysfunction are coexistent.

The readers of this article need to be aware of the practical dangers involved in the complex management of these patients. Rapid withdrawal of steroids in a patient who has been shown to have either vocal cord dysfunction or hyperventilation is hazardous as the latter conditions may be a sequel to or co-exist with severe asthma. We would recommend a staggered steroid withdrawal during hospital supervision even in patients with convincing evidence of alternative pathophysiology to explain their apparent "pseudo-steroid resistant asthma".

R NIVEN
F KELLETT
North West Lung Research Centre, Wythenshawe Hospital, Southern Road, Wythenshawe, Manchester M23 9LT, UK


AUTHORS’ REPLY

Professor Ayres rather difficult in the decidedly skewed population of pseudo-steroid resistant asthma is rather difficult in the decidedly skewed population of pseudo-steroid resistant asthma. In addition, the opportunity to psychological disorders in other disease states. To define a denominator for the proportion of pseudo-steroid resistant asthma is rather difficult in the decidedly skewed population of pseudo-steroid resistant asthma. This leads on to the next point—namely, that severe asthma and vocal cord dysfunction/hyperventilation may, and frequently do, co-exist. Bronchoscopic examination may help to identify those patients who have significant underlying inflammatory disease of the airways, but the sensitivity and specificity of lavage and biopsy material has not been evaluated in patients with severe asthma on steroid therapy. In addition, the identification of vocal cord dysfunction and/or hyperventilation does not necessarily result in a successful withdrawal of steroids and, indeed, inappropriately rapid or unsupervised withdrawal of treatment may have catastrophic results if severe asthma and vocal cord dysfunction are coexistent.

The readers of this article need to be aware of the practical dangers involved in the complex management of these patients. Rapid withdrawal of steroids in a patient who has been shown to have either vocal cord dysfunction or hyperventilation is hazardous as the latter conditions may be a sequel to or co-exist with severe asthma. We would recommend a staggered steroid withdrawal during hospital supervision even in patients with convincing evidence of alternative pathophysiology to explain their apparent "pseudo-steroid resistant asthma".

R NIVEN
F KELLETT
North West Lung Research Centre, Wythenshawe Hospital, Southern Road, Wythenshawe, Manchester M23 9LT, UK


Paul S Thomas
Department of Respiratory Medicine, Prince of Wales Hospital, Randwick, Sydney, NSW 2031, Australia

We would like to thank Dr Thomas and coworkers for their detailed report of a number of cases of apparent severe asthma resulting in prescribed oral steroid therapy for which an alternative aetiology, particularly of a functional nature, appeared to be the major problem. Those physicians who run difficult asthma clinics around the country will be familiar with the practical issues raised by the patients and the authors advice with investigation protocol, psychological and functional management is helpful.

However, we feel that there are a number of important issues that should have been addressed by the authors. Firstly, the flow-volume loops presented are not altogether characteristic of vocal cord dysfunction in that a number of the test results are reproducible and none show the typical features of large airway obstruction. Secondly, six of the 14 cases detailed have had episodes of ventilation. Superficially this might imply the presence of severe asthma, but no information regarding these episodes is presented. Critical information can be gleaned from anaesthetic records and this should be part of the routine assessment of these patients. The inflation pressures (if accurately recorded) and duration of required ventilation can be used to assess the degree of airway resistance and the reversibility of it at the time of ventilation. Low pressures and a short period of ventilation are indicators that the episode was not primarily severe bronchoconstriction (as presumably clinically perceived at the time), and is a major clue to the underlying functional aetiology of the problem (either vocal cord dysfunction or pseudo-severe asthma). High inflation pressure or a prolonged period of ventilation suggest that there is severe airways obstruction and any associated functional disease is superimposed.

This leads on to the next point—namely, that severe asthma and vocal cord dysfunction/hyperventilation may, and frequently do, co-exist. Bronchoscopic examination may help to identify those patients who have significant underlying inflammatory disease of the airways, but the sensitivity and specificity of lavage and biopsy material has not been evaluated in patients with severe asthma on steroid therapy. In addition, the identification of vocal cord dysfunction and/or hyperventilation does not necessarily result in a successful withdrawal of steroids and, indeed, inappropriately rapid or unsupervised withdrawal of treatment may have catastrophic results if severe asthma and vocal cord dysfunction are coexistent.

The readers of this article need to be aware of the practical dangers involved in the complex management of these patients. Rapid withdrawal of steroids in a patient who has been shown to have either vocal cord dysfunction or hyperventilation is hazardous as the latter conditions may be a sequel to or co-exist with severe asthma. We would recommend a staggered steroid withdrawal during hospital supervision even in patients with convincing evidence of alternative pathophysiology to explain their apparent "pseudo-steroid resistant asthma".

R NIVEN
F KELLETT
North West Lung Research Centre, Wythenshawe Hospital, Southern Road, Wythenshawe, Manchester M23 9LT, UK