



Supporting Information

Supplementary material

This appendix was part of the submitted manuscript and has been peer reviewed.
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Appendix to: Reddel HK. Common conditions that mimic asthma. *Med J Aust* 2022; doi: 10.5694/mja2.51467.

Clinical vignettes

Vignette 1

A 38 year old woman who was 34 weeks pregnant presented for review of uncontrolled asthma, with the main symptom being severe persistent coughing. She had asthma that was previously mild, but a history of recurrent sore throats, associated with coughing and dysphonia, which interfered with her job as an architect. During the pregnancy, she started coughing at about week 20. There was no improvement with antibiotics and commencement of inhaled corticosteroids. Her symptoms worsened with bushfire smoke, and she fractured a rib due to coughing. She presented to the ED and was treated with high dose salbutamol, and discharged on prednisone, high dose fluticasone furoate/vilanterol and frequent salbutamol. She improved somewhat, but symptoms worsened with a cold. She was using salbutamol every 2 hours with little relief, and had another ED presentation and another course of prednisone. On examination in the clinic, she was coughing incessantly. The cough was triggered by speaking, deep breaths, lying down, and irritants (e.g. cleaning sprays). She localised her symptoms to her larynx. The chest was clear to auscultation. Spirometry was completely normal, with FEV1 98% predicted and FVC 100% predicted, with no significant increase after Ventolin. Inspiratory stridor could be heard every time she took a fast breath in. A provisional diagnosis of inducible laryngeal obstruction was made, likely due to pregnancy-related reflux. Her cough responded quickly to vocal hygiene strategies including slow breathing through her nose, taking a sip of water with a hard swallow whenever she felt that a cough was impending, and avoiding over-use of her voice. High dose salbutamol was rapidly tapered and ceased, her asthma preventer medication was tapered to low dose, lung function remained normal, and her cough almost completely ceased. Functional laryngoscopy 2 months after delivery elicited coughing, with the diagnosis being ongoing laryngeal hypersensitivity. This patient had been treated for acute severe asthma in the ED on two occasions; if lung function had been measured, it would have been obvious that this was not the correct diagnosis.

Vignette 2

A 50 year old woman presented from a regional area with a history of recurrent episodes of shortness of breath that were gradually becoming more severe, despite treatment for asthma with moderate dose budesonide/formoterol. She had a past history of mild left sided radiation fibrosis related to treatment of Hodgkins lymphoma 20 years earlier, with corresponding mild mixed restrictive and obstructive pattern on spirometry. She was given a course of prednisone by her GP and her breathlessness improved immediately, but worsened when the prednisone was ceased. The same happened on two occasions. Given the good clinical response to oral corticosteroids, with worsening when transferring back to inhaled corticosteroids, the most likely explanation was either poor adherence or incorrect inhaler technique. However, the patient had dispensing records consistent with her reported good adherence, and her inhaler technique was perfect. Her breathlessness continued to worsen despite only mild impairment on spirometry. A high resolution CT chest showed very dense calcification in the area of the mitral valve. An echocardiogram found very tight mitral stenosis, and the patient underwent urgent mitral valve replacement, with immediate resolution of her dyspnoea. In this case, the discordance between the severity of the patient's dyspnoea and the spirometry findings suggested a cardiac cause.