



## IMAGES IN THORAX

## A deadly web

Alexandra M Nanzer,<sup>1</sup> Simon Jordan,<sup>2</sup> Simon Padley,<sup>3</sup> Mark Griffiths,<sup>4</sup> Matthew Hind<sup>1</sup>

<sup>1</sup>Department of Respiratory Medicine, Royal Brompton Hospital, London, UK

<sup>2</sup>Thoracic Surgery, Royal Brompton Hospital, London, UK

<sup>3</sup>Department of Radiology, Royal Brompton Hospital, London, UK

<sup>4</sup>Adult Intensive Care Unit, Royal Brompton Hospital, London, UK

**Correspondence to**

Dr Alexandra Nanzer, Department of Respiratory Medicine, Royal Brompton Hospital, Sydney Street, London SW1 6NP, UK; A.Nanzer-Kelly@rbht.nhs.uk

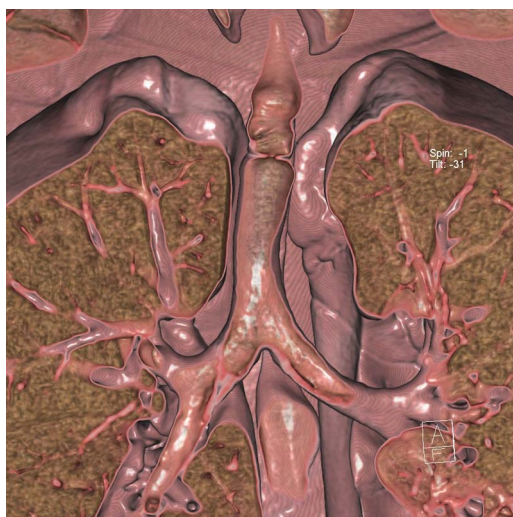
Received 29 November 2013

Accepted 23 December 2013

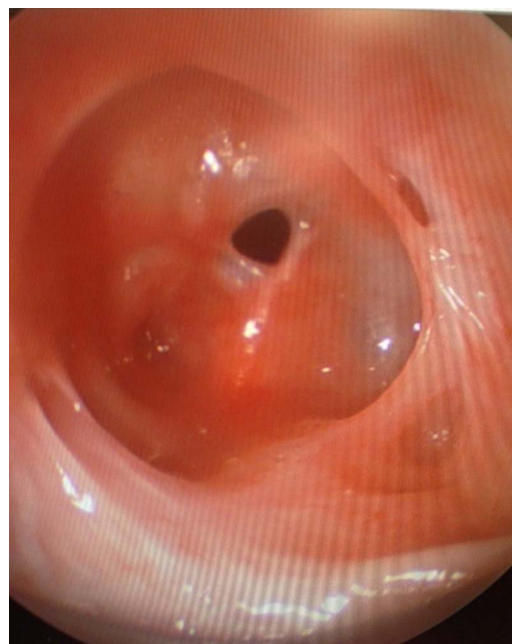
Published Online First

31 January 2014

An 18-year-old patient with metabolic myopathy due to long-chain fatty acid coenzyme A dehydrogenase-deficiency<sup>1 2</sup> presented with worsening positional dyspnoea. He had required invasive ventilation via tracheostomy 6 months earlier. Examination revealed respiratory distress, a prolonged inspiratory phase and abdominal paradox. Non-invasive ventilation improved dyspnoea but surprisingly high inspiratory pressures were required. CT imaging revealed subtle, sublaryngeal irregularity. Volumetric reconstruction identified a thin tracheal web (figure 1). Diathermy via rigid bronchoscopy (figure 2) immediately improved ventilation. Our patient had the potentially deadly combination of a pinhole trachea with respiratory muscle weakness, unable to generate audible stridor. Clinicians should be aware of limitations in conventional CT assessment of the upper airway.



**Figure 1** Multiplanar and volumetric reconstruction of the computer generated image of the trachea showing a tight but thin tracheal web with a maximum diameter of only 2 mm at the site of the previous tracheostomy.



**Figure 2** Bronchoscopic view of the tracheal web.

**Contributors** AMN and MDH cared for the patient and wrote the manuscript. SJ performed rigid bronchoscopy and diathermy. SP reviewed and reconstructed CT images. MG provided intensive care management for the patient.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; internally peer reviewed.

**REFERENCES**

- 1 Online Mendelian Inheritance in Man, OMIM. Johns Hopkins University, Baltimore, MD. MIM Number: #231680: 05/25/2012: <http://omim.org/>
- 2 Amendt BA, Rhead WJ. The multiple acyl-coenzyme A dehydrogenation disorders, glutaric aciduria type II and ethylmalonic-adipic aciduria: mitochondrial fatty acid oxidation, acyl-coenzyme A dehydrogenase, and electron transfer flavoprotein activities in fibroblasts. *J Clin Invest* 1986;78:205–13.



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**To cite:** Nanzer AM, Jordan S, Padley S, et al. *Thorax* 2015;**70**:101.