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## Dying spell caused by vascular ring

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## DESCRIPTION

A 1-year-old boy was admitted because of fever, cough, and recurrent wheezing. He had a transient history of wheezing at birth. After moving to solid food at 6 months of age, difficulty in feeding, noisy breathing, and stridor occurred. His mother suffered from allergic rhinitis, and his cousin suffered from atopic dermatitis. The patient showed apparent expiratory wheezing, and was diagnosed with asthma and bronchitis. He was treated for 1 week with oxygen, nebulised salbutamol, and intravenous methylprednisolone and antibiotics. The fever subsided soon after treatment was initiated, and the cough and wheezing improved gradually. However, noisy breathing and stridor worsened when

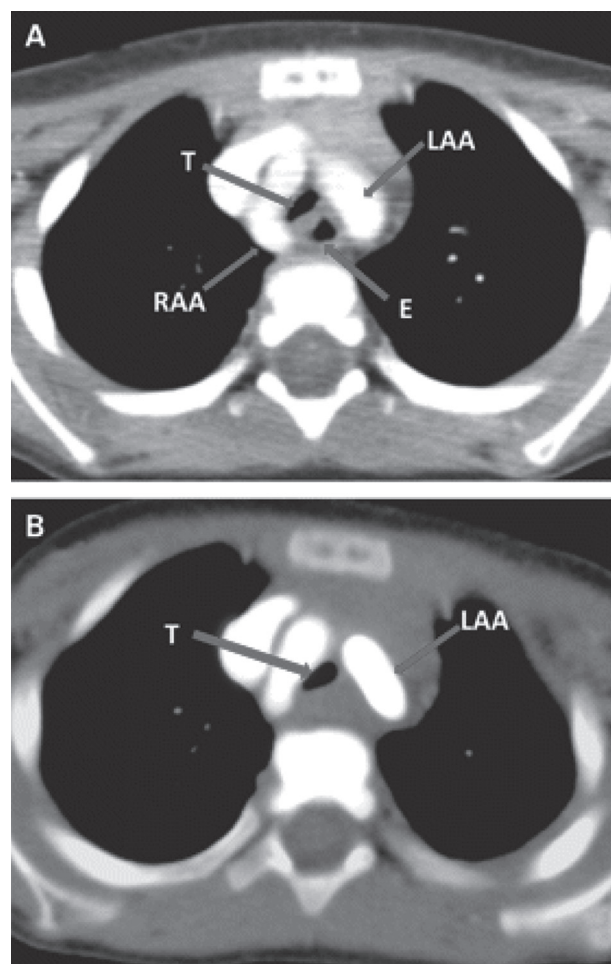


**Figure 1** Chest axial computed tomography (CT) scan before (A) and after surgical division (B). E, oesophagus; LAA, left aortic arch; RAA, right aortic arch; T, trachea.

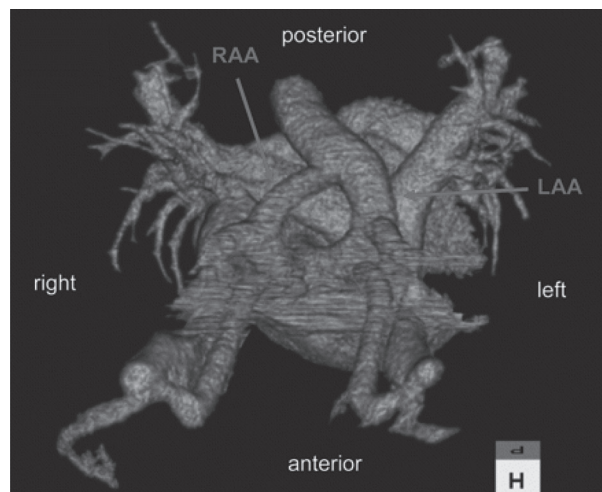


**Figure 2** Three dimensional image of the vascular ring reconstructed from the CT scan of the thorax before surgical division. LAA, left aortic arch; RAA, right aortic arch.

he cried hard. Nasopharyngoscopy and oesophageal pH monitoring revealed no abnormality. Because his general appearance was good, he was discharged to visit another hospital for further examination of the persistent stridor using bronchoscopy, which was arranged after 3 weeks. The day before bronchoscopy, he was admitted to our hospital again after choking on a piece of potato, requiring resuscitation and mechanical ventilation for a week. An enhanced chest computed tomography scan revealed a complete vascular ring of the double aortic arch (figs 1A and 2), which was relieved following surgery (fig 1B). Because of its long compression in the vascular ring before birth, the trachea remained compressed to some degree, but feeding difficulty and respiratory symptoms improved following surgery.<sup>1</sup> Although not common, when adverse conditions develop in an infant after moving to solid food, a vascular ring should be considered in the differential diagnosis of intractable stridor,<sup>2</sup> because both the trachea and oesophagus pass through the narrow circle.

**Competing interests** None.

**Patient consent** Patient/guardian consent was obtained for publication.

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