Pulmonary Artery Sling Causing Stridor in a Neonate

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Abstract
Neonates with upper airway obstruction commonly present with stridor. We report a case of pulmonary artery sling and congenital tracheal stenosis in a neonate who presented with stridor and respiratory distress. Management of tracheal stenosis, in particular, the use of slide tracheoplasty, is discussed and reviewed.

Key words
Congenital tracheal stenosis; Magnetic resonance imaging; Pulmonary artery sling; Slide tracheoplasty

Introduction
Stridor is a warning sign that suggests upper airway obstruction. Among the long list of causes of upper airway obstruction, one should particularly have a high index of suspicion for congenital causes if it presents in the early neonatal period. Early bronchoscopy and the appropriate use of radiological imaging examinations can assist clinicians to arrive at the diagnosis. We presented a case of pulmonary artery sling with tracheal stenosis that presented with stridor. Diagnosis of pulmonary artery sling and treatment of tracheal stenosis was discussed.

Case Report
HKW, a previously well baby boy, born at 39 weeks of gestation with birth weight 2.57 kg to a non-consanguineous couple, presented on day 5 of life with stridor at rest. Antenatal history and perinatal course were unremarkable, and there was no evidence of sepsis. On physical examination, he had biphasic stridor with suprasternal insucking but no tachypnoea. Cardiovascular system and other parts of the examination were normal. Chest X-ray and lateral neck X-ray were normal.

Bronchoscopy showed an elongated and tubular epiglottis with collapse of arytenoid and cuneiform tubercles during inspiration, as well as an extramural compression at the mid-tracheal level, and there was no laryngomalacia. Magnetic resonance imaging (MRI) of thorax (Siemens Magnetom Vision Plus, 1.5T VB33G (Erlanger, Germany)) (Figure 1) revealed an anomalous left pulmonary artery, which branched from the right main pulmonary artery and passed behind the trachea to reach the left lung. Echocardiogram, cardiac catheterisation and pulmonary arteriogram (Figure 2) confirmed the anomalous