Sir,

Pulmonary artery sling is an uncommon congenital vascular anomaly with a reported prevalence of 59 cases per million children. The left sixth aortic arch does not form properly in utero, resulting in the left pulmonary artery origin from the posterior surface of right pulmonary artery, instead of the main pulmonary trunk. There is anomalous long course of the left pulmonary artery in between the trachea and the esophagus. Due to this anomalous course, it forms a sling around the distal trachea and proximal right main bronchus to reach the left hilum causing compression of these structures. Clinical features include stridor, respiratory distress, and recurrent pneumonia. Imaging plays a crucial role in diagnosis with cross-sectional imaging including both contrast-enhanced computed tomography (CT) and/or magnetic resonance imaging (MRI), providing the diagnosis in most cases along with detailed anatomical information needed for surgical management. Herein, we report a case letter of pulmonary artery sling causing airway compression.

A 6-month-old infant with uneventful birth history presented to the emergency department with difficulty in breathing and cough of sudden onset. The patient had noisy breathing since birth that got aggravated on crying and was relieved with sleep or rest. There was no history suggestive of foreign body aspiration. There were two previous hospital admissions requiring intubation and mechanical ventilation in the second admission after being diagnosed with aspiration pneumonia. On examination, the infant was afebrile with pulse rate 130/min, respiratory rate 62/min, oxygen saturation 98% on nasal prongs, and blood pressure 88/44 mm/Hg. Respiratory examination revealed biphasic stridor, suprasternal and intercostal retractions, and bilateral rhonchi, but air entry was equal bilaterally. Laboratory studies revealed a total leukocyte count of 10,800 per cubic millimeter with hemoglobin of 8.5 g/dl. Chest X-ray was unremarkable. A CT angiography of the thorax was performed which revealed the left pulmonary artery originating from the right pulmonary artery (“pulmonary sling”), coursing in between trachea and esophagus causing tracheal stenosis [Figure 1]. Double superior vena cava was also seen. Rest of the mediastinal structures were normal. Surgical repair was performed with ligation of the left pulmonary artery originating from the right pulmonary artery (“pulmonary sling”), coursing in between trachea and esophagus causing tracheal stenosis [Figure 1]. Double superior vena cava was also seen. Rest of the mediastinal structures were normal. Surgical repair was performed with ligation of the left pulmonary artery, anterior translocation, and anastomosis to main pulmonary trunk on cardiopulmonary bypass.

Two types of pulmonary artery slings have been described in the literature. Type 1 sling is characterized by a normal tracheobronchial pattern. It is further subdivided into Type 1A and Type 1B depending on the presence or absence of pre-eparterial bronchus, respectively. Type 2 sling is characterized by an abnormal tracheobronchial pattern with tracheal bifurcation at T6 vertebral level. Two subtypes have been described with Type 2A associated with left main bronchus giving rise to bridging bronchus supplying the right middle and lower lobe, and Type 2B is associated with the left main bronchus giving rise to a bronchus supplying the hypoplastic right lung. Congenital heart disease is associated in 30% of the cases. Clinical features are nonspecific and include wheeze, stridor, feeding abnormalities, cough, and recurrent respiratory infections. Features on chest X-ray are often nonspecific and show narrowing of trachea or bronchus, airway deviation, postobstructive atelectasis, or emphysema. On contrast esophagogram, there is anterior indentation on the esophagus. Contrast-enhanced CT and MRI thorax are diagnostic in most cases along with detailed anatomical information needed for surgical management.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.
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Conflicts of interest
There are no conflicts of interest.

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