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Letter to the Editor

Posterior mediastinal lipoblastoma: A rare cause of acute respiratory compromise

To the Editor

Mediastinal syndromes are a group of disorders involving, principally, the mediastinum and characterized by infiltration, entrapment, or compression of nearby organs.[1] Children are particularly sensitive to mediastinal lesions because of their limited chest volume.[2] Here, we report a case of an infant with a posterior mediastinal lipoblastoma triggering an unexpected life-threatening emergency.

A healthy 6-month-old male infant developed a productive cough with stridor 1 day before visiting our hospital. In the pediatric emergency department, dyspnea with obvious subcostal retraction and an SpO_2 level of 91% were observed. Physical examination showed stridor and wheezing. The infant was administered oxygen through a cannula to maintain saturation. Based on an impression of bronchiolitis with respiratory failure, he was admitted to our pediatric intensive care unit (PICU) for further management.

His condition improved in the PICU, except in terms of persistence of the stridor and poor oral intake, on maintenance of hydration and oxygenation. A wide mediastinum was incidentally observed on the chest X-ray (Fig. 1a), and a chest computed tomography (CT) was scheduled. However, sudden-onset cyanosis and a fall in the SpO_2 level to 70% occurred on the third hospitalized day. Emergency intubation and mechanical ventilation were performed. An urgent chest CT revealed a well-defined, fat density, $6.3 \times 4.7 \times 3.7$ cm^3 mass in the upper posterior mediastinum, severely displacing the trachea and the esophagus

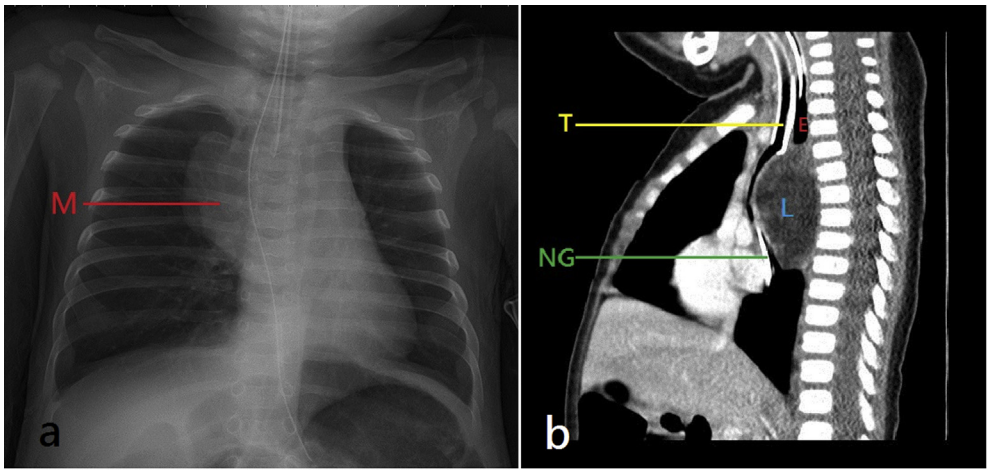

Figure 1 Images: **a** Chest radiograph (anterior—posterior view): A huge mediastinal mass lies over the heart (arrow). **b** Computed tomography: A fatty mass $6.3 \times 4.7 \times 3.7$ cm in dimensions protruding from the upper posterior mediastinum has displaced the trachea, the bronchus, and the esophagus anteriorly (E: esophagus, T: trachea with an endotracheal tube, L: lipoblastoma, NG: nasogastric tube).

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and entrapping the descending aorta (Fig. 1b). Exploratory thoracotomy featuring complete excision was performed. The formal pathological report revealed a lipoblastoma. The infant's respiratory condition improved, without the requirement for chemotherapy, and he was discharged without any residual symptoms. No recurrence has been recorded during 3 years of follow-up.

Lipoblastoma, a painless and rapidly growing mass primarily affecting infants and young children (age <1 year: 40%; age <3 years: 80%—90%), exhibits a slight male predominance (2—3:1) and a measurable local recurrence rate (14%—25%).[3,4] Lipoblastomas are divided into two forms, a localized, superficial well-circumscribed form termed as lipoblastoma and a diffuse, multicentric infiltrative form termed as lipoblastomatosis.[4,5] The prognosis after complete excision is excellent, and a minimum of 3—5 years of follow-up with imaging is necessary.[4,5]

When the tumor arises from the mediastinum, respiratory symptoms such as recurrent respiratory infection, cough, and wheezing may develop.[4] The mediastinum is anatomically divided into the anterior, middle, and posterior regions. Either a malignancy or an infection may cause mediastinal syndrome in children. Posterior mediastinal masses predominantly produce effects on the spinal cord and rarely cause airway problems. Moreover, mediastinal lipoblastoma is rare and more commonly found in the anterior mediastinum.[5] In our case, although the tumor was benign, rapid growth from the posterior mediastinum created an enormous tumor burden that displaced the esophagus, triggering dysphagia, and then the trachea, leading to severe dyspnea. The only initial clues during physical examination were the stridor and wheezing, implying that both the upper and lower airways were obstructed.

In conclusion, physicians must be aware of the unusual features accompanying wheezing in infants and schedule a chest X-ray when a mediastinal lesion is suspected. A tumor in the mediastinum may cause acute mediastinal syndrome and constitute a life-threatening emergency in children.

Conflict of interest

The authors stated there has no conflict of interest.

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