

Tuberculous Mediastinal Mass Presenting With Stridor in a 3-Month-Old Child

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A 3-month-old boy with a history of intermittent stridor was found to have obstructive emphysema on chest x-ray. Further investigations found a mediastinal mass compressing the carina and left mainstem bronchus. The mass was excised and found to be of tuberculous origin.

J Pediatr Surg 38:624-625. Copyright 2003, Elsevier Science (USA). All rights reserved.

INDEX WORDS: Tuberculosis, mediastinal mass, stridor, obstructive emphysema.

STRIDOR WITH OBSTRUCTIVE emphysema in an infant is most likely caused by a foreign body or mass. The differential diagnosis of a noncystic mediastinal mass includes lymphoma, teratoma, lymphangioma, duplication of the gastrointestinal tract, and lymphadenopathy. We present an unusual case of a tuberculous mediastinal mass presenting with stridor and obstructive emphysema in a 3-month-old child.

CASE REPORT

A 3-month-old boy presented with a one-month history of intermittent stridor and dry cough without fever. The patient was noted to be tachypneic with labored breathing. The child's mother had perinatal exposure to tuberculosis but a normal chest radiograph. The review of systems, physical examination, and laboratory data were otherwise normal. A chest radiograph showed hyperinflation of the left lung (Fig 1). An obstructing foreign body or mass was suspected. A chest computed tomography (CT) scan was obtained and showed a noncystic paratracheal subcarinal mass compressing the carina and left mainstem bronchus (Fig 2).

Bronchoscopy results showed extrinsic compression by a mass at the level of the carina with near occlusion of the left mainstem bronchus. Granulomatous friable material within the left mainstem bronchus was sent for culture, cytology, and pathology. Chronic inflammation and foci of amorphous necrotic debris were noted with no organisms on AFB, GMS, or PAS staining.

To prevent complete airway occlusion and to provide a diagnosis, resection of the mediastinal mass was performed via a right thoracotomy. The 3-cm × 2-cm mass appeared to be an enlarged inflammatory lymph node with erosion into the carina. Frozen and permanent sections showed caseating granuloma with necrosis. Pending a workup for tuberculosis, the patient was transported to an isolation bed in the pediatric intensive care unit, where he was extubated cautiously.

The patient's postoperative course was uneventful, and the stridor resolved. Antituberculosis medications including INH, rifampin, pyra-

zinamide, and ethambutol were initiated when AFB stains returned positive. Evaluations for disseminated tuberculosis were negative. The Public Health Service was notified, and the patient's family members were referred to a county tuberculosis clinic for follow-up.

DISCUSSION

Stridor is an unusual presenting symptom for children with tuberculosis. The mechanism for stridor in patients with tuberculosis is either intrinsic airway compression secondary to a laryngeal or endobronchial lesion or extrinsic airway compression secondary to lymphadenopathy or abscess. Laryngeal tuberculosis in children is rare and, unlike in adults who usually manifest advanced pulmonary disease, it usually is caused by primary infection.¹ In 9 reported cases, one required tracheostomy. Endobronchial tuberculosis occurs in up to 30% of children with pulmonary tuberculosis but rarely results in obstruction requiring surgical intervention.² Laryngeal and endobronchial lesions can be visualized with bronchoscopy, which should be performed in all children with stridor and obstructive emphysema.

Tuberculosis presenting as an isolated mediastinal mass and requiring surgical resection is exceedingly rare. Only one case report was found in the literature.³ Our case is especially unusual given the young age of the child. Exposure most likely occurred perinatally or during the first month of life. The only known exposure was the infant's mother, who was positive for PPD during the pregnancy but had a normal chest x-ray.

We felt compelled to excise the mass given its life-threatening location and because the diagnosis was unknown at the time of excision. Antituberculous therapy may have reduced the size of the mediastinal mass and prevented the need for surgery if the diagnosis was known. However, tuberculous adenitis does not always respond to medications. In fact, lymph nodes may grow larger after institution of therapy.⁴

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0022-3468/03/3804-0023\$30.00/0

doi:10.1053/jpsu.2003.50137

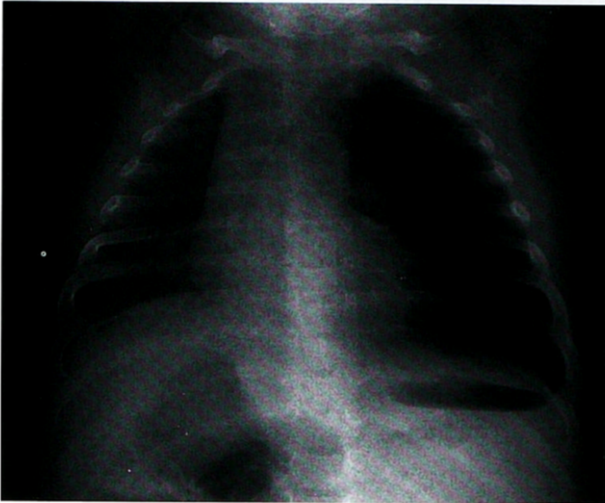


Fig 1. Chest x-ray shows hyperinflation of the left lung.

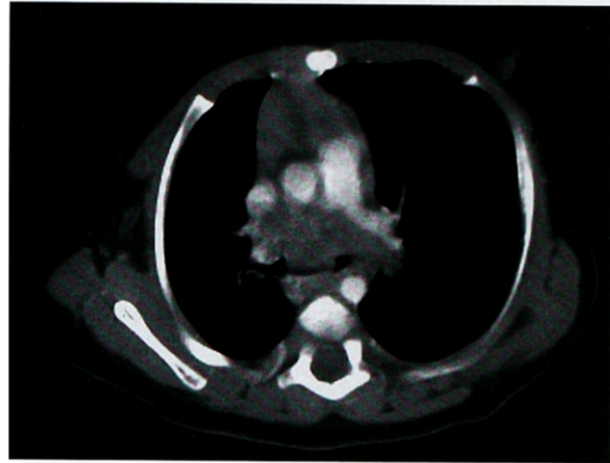


Fig 2. CT scan of the mediastinal mass compressing the carina and left mainstem bronchus.

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