

An unusual cause of an anterior mediastinal mass in a 52-day-old infant with mediastinal tuberculosis

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Tuberculosis (TB) continues to be one of the major infectious diseases threatening millions of lives worldwide.^[1] We encountered a 52-day-old male infant with a anterior mediastinal mass caused by tuberculosis.

On admission to our hospital, the infant presented with respiratory distress, wheezing, fever, and cough. Decreased breath sounds were audible at the apex of the left chest. His temperature was 38.2 °C. Laboratory examination revealed that tuberculin skin test was 0 mm, white blood cell 12.800/mm³, erythrocyte sedimentation rate 58 mm/h, and C-reactive protein 88.5 mg/L. Anti-human immunodeficient virus (HIV) test was negative. Chest radiograph demonstrated a mass extending from the anterior mediastinal area to

the left upper lung (Fig. 1 A&B). Thoracic computed tomography scan revealed an anterior mediastinal cystic necrotic mass (4×6×3 cm), which compressed the left bronchus and vessels extending superiorly into the left hemithorax (Fig. 1C). Calcified granulomas with different size and shape in lymph nodes and thymus parenchyma were observed under a microscope (Fig. 2).

Mediastinal tuberculous lymphadenitis may occur as a complication of lympho-hematogenous dissemination of pulmonary TB or as a primary disease without pulmonary involvement. The right paratracheal lymph node is the commonest site of mediastinal lymphadenitis. The incidence rate of isolated mediastinal TB lymphadenitis without pulmonary involvement is around 5.1%-1.3% in adults.

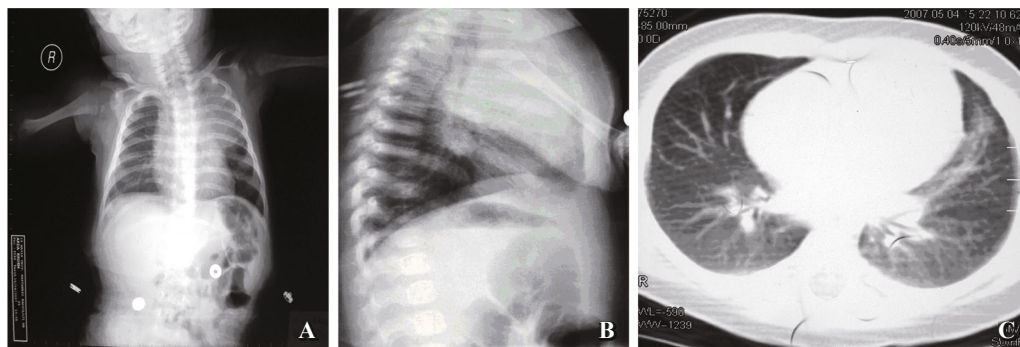


Fig. 1. A: Plain chest radiograph demonstrating anterior mediastinal opacity; B: Lateral chest radiograph demonstrating anterior mediastinal opacity; C: A tuberculous mediastinal mass extending into the left lung.

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Mediastinal tuberculosis is rarely seen in young infants and children, and its invasion is observed first on lymph nodes and then the thymus.^[2-4]

Tuberculosis is seen most frequently in the Marmara region which is followed by the Black Sea Region in Turkey.^[5] Our patient was from the Central Black Sea Region. He did not have immunosuppression or malnutrition, but his socioeconomic level was low. His father suffered from tuberculosis 17 years ago. Information about the father was obtained from the

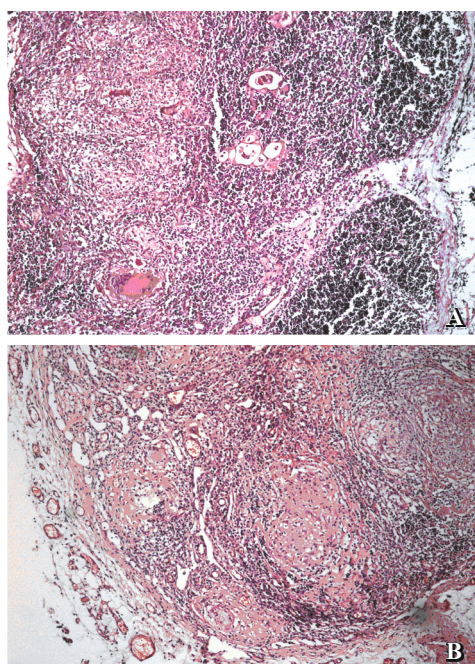


Fig. 2. Histopathologic findings of a mediastinal tuberculosis mass (hematoxylin and eosin staining, original magnification $\times 100$, $\times 40$, respectively). The granulomas of tuberculosis in the paracymal portion of the thymus (A) and lymph nodes (B).

Tuberculosis Control Dispensary. Acid resistant bacilli were found positive in his mucus after tuberculosis screening and the patient was diagnosed with reactive tuberculosis.

Histopathological examination of the patient was

performed with a pre-diagnosis of anterior mediastinal mass. No culture was made since tuberculosis was excluded from the pre-diagnosis. Through direct microscopic examination, the patient was assessed with calcified granulomatous reaction. He was diagnosed with tuberculosis due to a history of close contact. The patient was given a two-month treatment with streptomycin and pyrazinamide and a six-month treatment with isoniazide and rifampicin. After the treatment, clinical symptoms and laboratory findings were recovered. The patient was followed up until the age of three years.

References

- 1 Druszczyńska M, Kowalewicz-Kulbat M, Fol M, Włodarczyk M, Rudnicka W. Latent M. tuberculosis infection--pathogenesis, diagnosis, treatment and prevention strategies. *Pol J Microbiol* 2012;61:3-10.
- 2 Geldmacher H, Taube C, Kroeger C, Magnussen H, Kirsten DK. Assessment of lymph node tuberculosis in Northern Germany: a clinical review. *Chest* 2002;121:1177-1182.
- 3 Blomberg TJ, Dow CJ. Contemporary mediastinal tuberculosis. *Thorax* 1980;35:392-396.
- 4 Venkateswara RV, Barron DJ, Brawn WJ, Clarke JR, Desai M, Parikh DH. A forgotten old disease: mediastinal tuberculous lymphadenitis in children. *Eur J Cardio-Thoracic Surgery* 2005;27:401-404.
- 5 Kılıçaslan Z. Tuberculosis in the World and Turkey. *ANKEM Derg* 2007;21:76-80.

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