

Six-year-old boy with mediastinal mass

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Abstract

Lymphoblastic lymphomas account for 20–30% of all non-Hodgkin lymphomas (NHL) in children, and most cases of childhood lymphoblastic lymphoma are T-cell type (T-LL).

T-LL occurs most frequently in late childhood and adolescence; with male predominance of 2:1. We present a paediatric case with a right sided mediastinal mass causing mediastinal shift diagnosed as T-LL.

Keywords: T-cell Lymphoblastic Lymphoma, Computed Tomography (CT).



A 6-yr-old boy presented with progressive shortness of breath and cough for one month. Chest radiograph (A) shows near complete white-out of right hemithorax causing mediastinal shift and leftward tracheal deviation. Sagittal CT images (B & C) show a huge approximately 16 x 16 x 12 cm mediastinal mass occupying the entire right hemithorax with mass effect, encasing all major vessels leading to severe compression of superior vena cava and bilateral brachiocephalic veins. There is also compression of the right main stem bronchus with complete right lung collapse. Fluid loculation in the right lung with surrounding soft tissue thickening suggests contiguous involvement. Below the diaphragm upper abdominal para-aortic soft tissue appears contiguous with the mediastinal

mass. Chest radiograph (D) after 7 days of induction chemotherapy shows significant improvement in right lung aeration, mild effusion, and partial lung collapse. Right mid-zone, para-cardiac opacification is likely due to residual mediastinal mass.

Lymphoblastic lymphoma usually presents as axillary, cervical, and supraclavicular lymphadenopathy and mediastinal mass in 50 to 70% of patients. Large masses may cause compressive complications like superior vena cava syndrome, tracheal obstruction, and pericardial effusions (with or without tamponade)¹. More than two-thirds with T-LL have bone marrow involvement at presentation². In thoracic lymphoma CT scan is the diagnostic modality of choice for initial staging³. T-LL responds well to chemotherapy; Katz et al. concluded that children and adolescents with T-LL have an overall and event free survival of 86.5% and 83.8% respectively⁴.

References

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