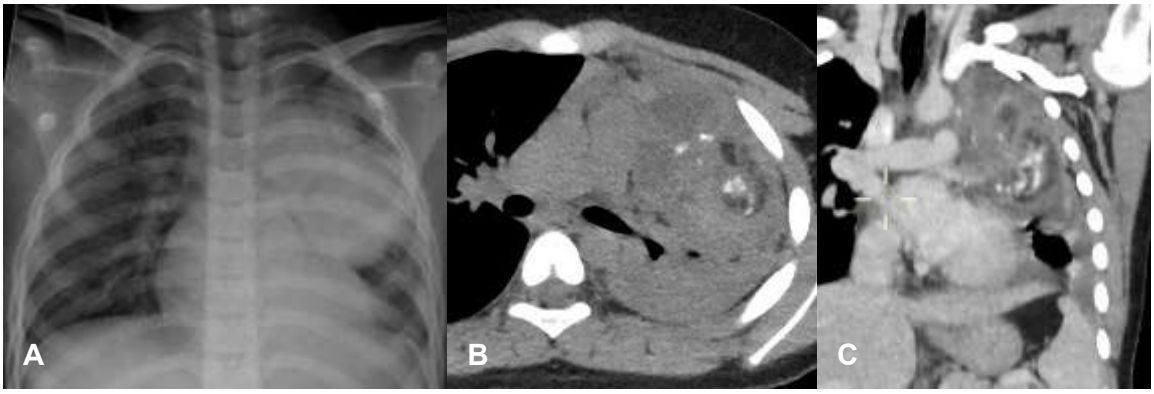
MEDIASTINAL TERATOMA



Case #8: *A 9-year-old boy, previously asymptomatic, complained of chest pain and shortness of breath. A chest x-ray (A) showed a lobulated mass with hilar overlay sign on the left, which required a follow-up CT scan shown above in non-contrast axial (B) and contrast-enhanced coronal (C) images. What is your diagnosis?*

Teratomas are the most common among the mediastinal germ cell tumors. These are commonly asymptomatic and are incidental findings on routine chest radiographs in older children. However, these may sometimes cause symptoms due to compression or erosion of adjacent structures.

On imaging, teratomas commonly appear as well-defined rounded or lobulated anterior mediastinal masses. Solid and cystic areas may be seen. About 90% have fatty component. These tumors contain derivatives of all three germ cell layers, thus, teeth, bone, and/or calcification (25%) as well as hair, sebaceous glands and/or muscle can be appreciated. The presence of soft tissue, cystic areas, fat, and calcification is highly suggestive of benign (mature) teratoma, although malignant (immature) tumors (14%) may have the same appearance. Unlike benign teratomas, fat is seen in only 40% in immature, more invasive tumors. Malignancy is suspected when more nodular soft tissue components, areas of necrosis or hemorrhage, and poorly defined margins that show thick enhancement are observed.

Management is by surgical resection to relieve symptoms, determine exact histology and exclude malignant elements.

References:

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