History
8 year old female with recent weight gain and difficulty breathing.

Diagnosis
Mediastinal Teratoma

Additional Clinical
Alpha Feto-protein-Normal
Beta hCG-Normal

Discussion
Mediastinal teratomas are germ cell tumors (GCTs) derived from one or more of the embryonic cell layers. Teratomas are classified as mature, immature, or mixed cell type. The most common extra-pelvic location for teratomas is the mediastinum, albeit comprising only 5% of all teratomas. Of these, 70-80% are benign mature teratomas with equal predilection for males and females. GCTs comprise 25% of all pediatric mediastinal masses.

Mediastinal teratomas almost always occur in the anterior mediastinum with very rare occurrences in the posterior mediastinum. Chest radiographs are usually the first to suggest their presence, but they are non-diagnostic unless teeth or skeletal parts are present. CT’s are equal or superior to MRI’s for further characterization and diagnosis. US and radionuclide studies are rarely utilized.

Almost all mature mediastinal teratomas reveal soft-tissue attenuation on CT. This is usually found in the periphery of the mass and associated with the tumor’s capsule. Fluid is most commonly the dominant component of a teratoma. Fat attenuation is also revealed in a majority of tumors. Calcification, either punctate, linear or flocculent, is also commonly seen. The presence of fat or calcification creates a high suspicion for teratoma.

Findings
CT-Axial and sagittal and coronal reformatted post-contrast CT of the chest demonstrates a round well circumscribed mediastinal mass contiguous with the great vessels and thymus containing calcium, fat and soft-tissue densities.

Reference

Contributor
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