



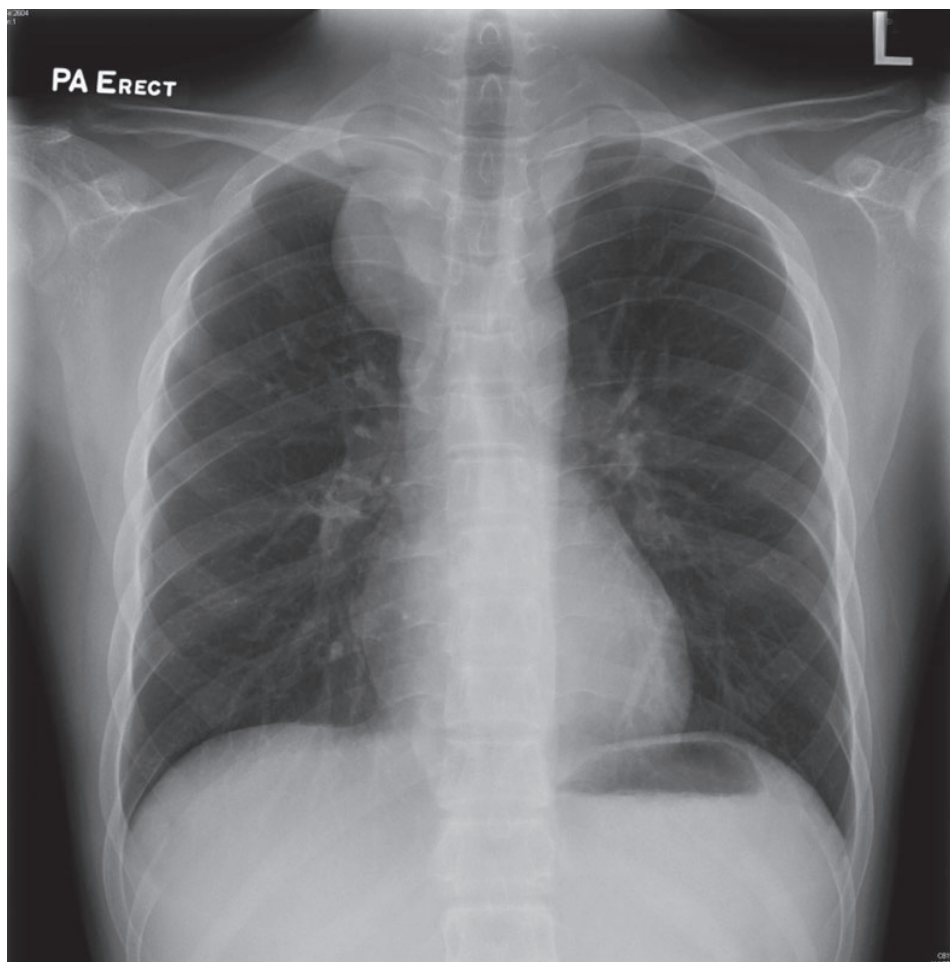
X-ray Quiz

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Case history

This 16-year-old boy is suffering from neurofibromatosis type 1. He presented to Ophthalmological department because of 1 cm neurofibroma at left lower eyelid and surgical removal was planned for him. This is the chest X-ray (CXR) taken as part of the pre-operation assessment.



Question

1. What is the abnormality?
2. What will you do next?

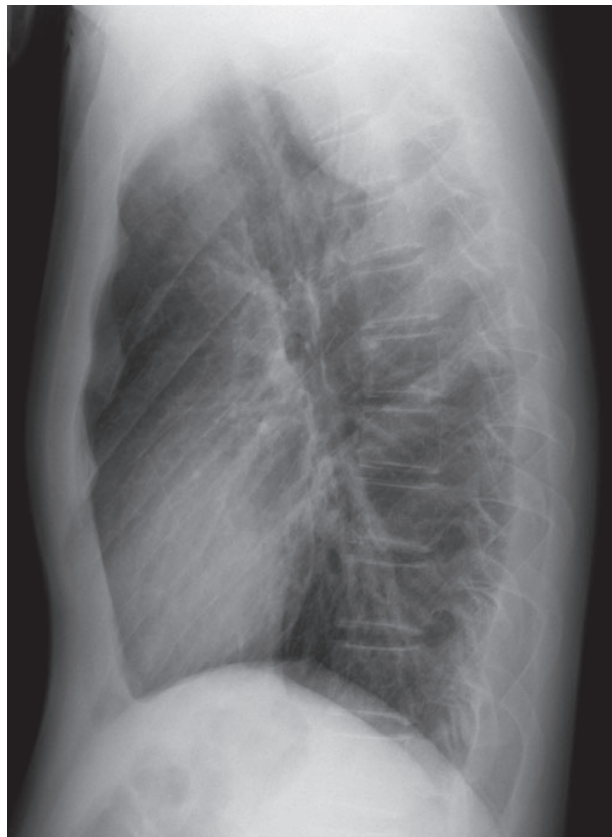
(Answer on page 21)



Answers to X-ray Quiz on page 18

Q1: This CXR showed a right upper mediastinal mass

Q2: A lateral radiograph was ordered to look for the position of the mass and confirmed that this mass arose from the posterior mediastinum. The ophthalmology operation was cancelled as the nature of mass, as well as the relationship between the mass and the airway needs further evaluation.



Mediastinal masses on chest X-ray are commonly encountered. The differential diagnosis of the mass can be narrowed down by the position – whether it is from anterior, middle or posterior mediastinum. Patients with mediastinal mass may be asymptomatic until there is a pressure effect on a sensitive structure or the structures are displaced.

The posterior mediastinum contains the following structures: sympathetic ganglia, nerve roots, lymph nodes, parasympathetic chain, thoracic duct, descending thoracic aorta, small vessels and the vertebrae. Most masses in the posterior mediastinum are neurogenic in nature. These can arise from the sympathetic ganglia (e.g. neuroblastoma) or from the nerve roots (e.g. schwannoma or neurofibroma). Lymphadenopathy, vertebral and descending thoracic aorta abnormalities could also be the potential causes for posterior mediastinal masses. Cystic lesions will be either neuroenteric cysts, schwannomas or meningoceles.

For this child, CT thorax was performed and found there was a 4.9 cm x 3.6 cm x 8.1 cm heterogenous soft tissue attenuated mass with lobulated lateral border located at right paravertebral region. There were also multiple smaller soft tissue masses at subcutaneous as well as other paraspinal and intercostal regions. The major airways were patent. Findings were suggestive of multiple neurofibromas.