

## CASE REPORT



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## Benign or Malignant lesion?

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## Abstract

Chest radiology is an important investigation in the diagnosis of intrathoracic lesions. Benign and malignant lesions have characteristic radiological appearance. Awareness about these characteristics is essential for further evaluation and diagnosis.

**Keywords:** Chest radiology feature of benign lesion; Chest radiology feature of malignant lesion; Posterior mediastinal tumor

## Introduction

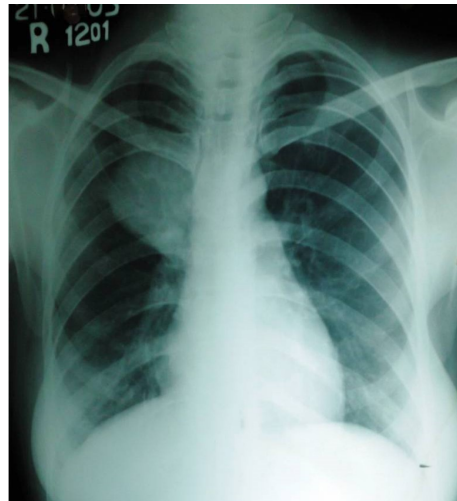
A 28-year-old female was admitted for the evaluation of slowly progressive right sided chest pain of 2 months' duration. She had no other respiratory or cardiac symptoms. She had no systemic symptoms, no history of trauma. She had no significant illness in the past.

General physical examination and systemic examination did not reveal any abnormality. Chest X-ray was taken (Figure 1). What is the most probable diagnosis?

Chest x-ray shows a nonhomogeneous opacity in the upper and mid zone. On careful observation posterior end of the 6<sup>th</sup> rib is eroded by the lesion. Rib erosion is a definite sign of malignancy. Since the posterior end of the rib is eroded the lesion is in the posterior mediastinum.<sup>(1)</sup> Hence the most probable diagnosis is malignant posterior mediastinal tumor.

Most common posterior mediastinal tumor is Neurogenic tumor.<sup>(2)</sup> This patient underwent CT guided biopsy which confirmed malignant Schwannoma. She was referred to oncology for further management.

Chest radiography is important in differentiating between benign and malignant intra thoracic tumors. Radiological characteristics of a benign tumor include smooth well defined borders, calcification, size less than 3 cm, tumor doubling time more than 2 years and polygonal shape. Three-dimensional ratio > 1.78 is also suggestive of benign lesion. Bigger the size, greater the chances of malignancy.<sup>(3)</sup> Radiological sign of malignancy includes speculated margins, invasion of surrounding structures, contrast enhancement, ill-defined borders, multiple lesions, associated pleural effusion and mediastinal adenopathy.<sup>(3)</sup> Erosion of adjacent bone is almost a sure radiological sign of malignancy. Rarely tuberculosis and Actinomyces can lead to bone involvement.<sup>(4)</sup>



**Fig 1.** Chest X-ray

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