

HUGE FIBROUS DYSPLASIA OF THE FIRST RIB REVEALED BY NEURALGIA

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ABSTRACT

Fibrous dysplasia is a benign fibro-osseous lesion rarely reported in the rib, but exceptionally in the first rib. Here we report a case of a huge compressive fibrodysplasia of the left first rib with left upper extremity neuralgia, successfully treated by complete surgical removal.

Keywords: Dysplasia; Huge; rib.

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INTRODUCTION

Fibrous dysplasia is a benign fibro-osseous lesion occurring throughout the skeletal system with a predilection for the craniofacial bones, long bones and ribs, that develops during bone formation.

CASE PRESENTATION

A 28-year-old woman presented to the thoracic surgery department with a 2-year history of left anterior and upper chest pain and recurrent minimal neuralgia. On physical examination, there were no abnormalities. A chest imaging radiograph showed a 6.5 x 3, 4 cm heterogeneous calcified lesion at the level of the first left anterior rib. Without involving the left chest wall, cortical scalloping of the left first rib, with multiple foci of annulus, calcification and associated periosteal reaction. (**Figure. 1**).

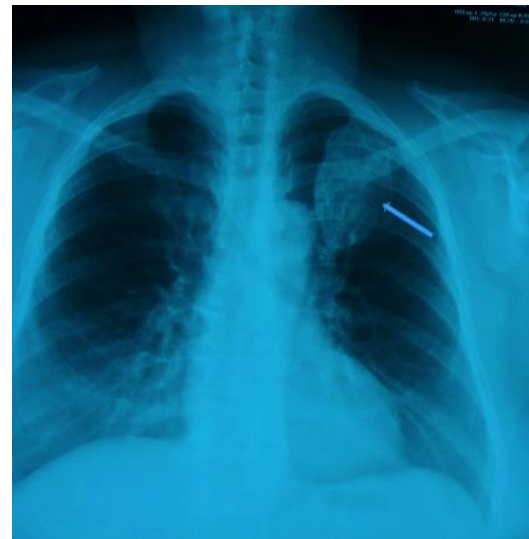


Figure 1: Chest X radiograph showing the tumor of the first left rib (Blue arrow)

Computed tomography (CT) scan showed a 6.5-cm benign bony tumor or tumor-like lesions in his proximal left first rib, in slight contact with the subclavian artery (**Fig. 2A**) and in contact with the chest wall (**Fig.2B**).

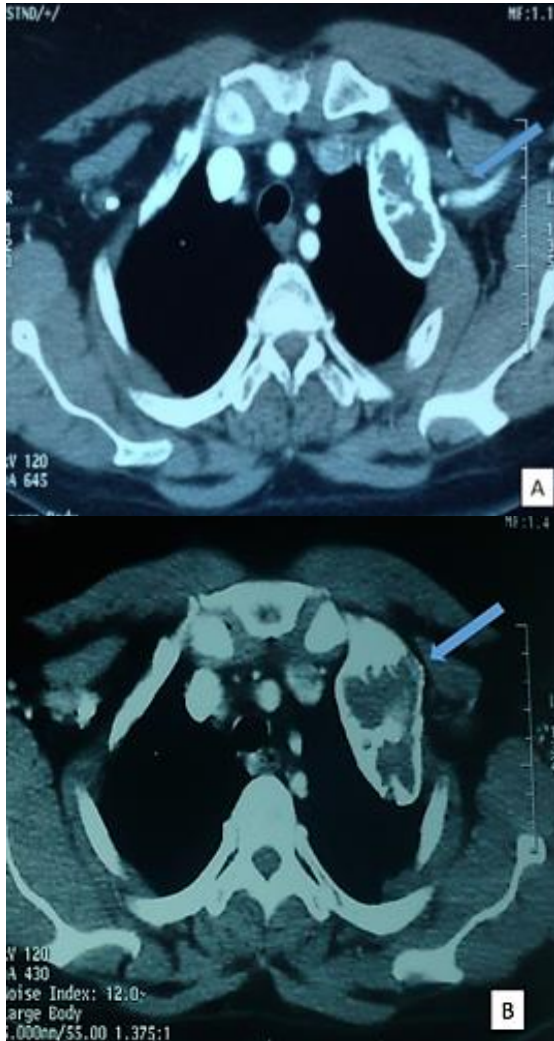


Figure 2: Chest CT showing the mass with spindle-shaped of the rib and bone cortex thinning of the first left rib (**Fig.2A**) with intimate contact with the left subclavian artery (**Fig.2B**).

The tumor was approached through a left supraclavicular incision, the first rib was resected almost in its entirety leaving approximately 1 cm on the lateral aspect and in the chondro-sternal cartilage on the sternal side (Fig 3).

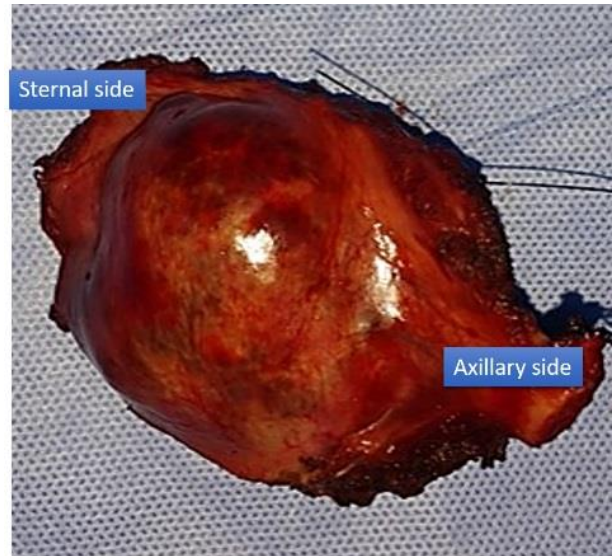


Figure 3: a well encapsulated mass after resection.

Post-operative recovery was rapid and uneventful; the patient was discharged home in good condition on postoperative day 5. Histopathology revealed periosteal fibrous dysplasia of the first free rib, with all margins of the resected mass free of tumor, confirming complete excision (**Fig.4**). The cosmetic result was good and the patient is doing well. The patient was reviewed clinically at 1, 3, and 12 months postoperatively without recurrence and with a good outcome.

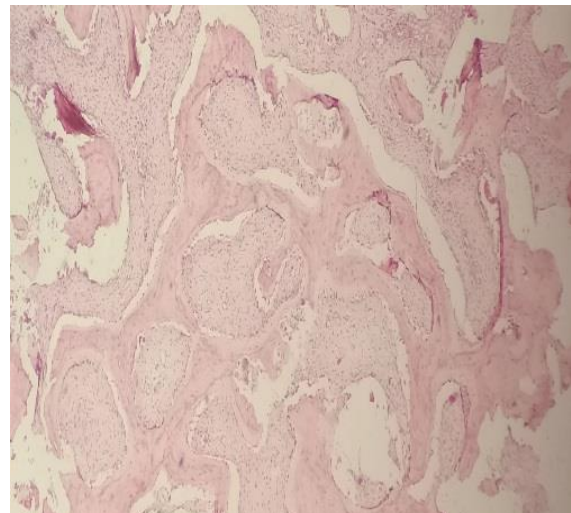


Figure 4: Irregular and hypocellular bony spans without osteoblastic border separated by moderately cellular fibrous tissue (HEX40).

Fibrous dysplasia (FD) is characterized by the replacement and deformation of normal bone by poorly organized and structurally defective osteofibrous tissue in one or more bones [1, 2]. In McCune-Albright syndrome, fibrous dysplasia is associated with hyperfunction of endocrine organs, whereas FD in Mazabraud syndrome is associated with intramuscular myxomas. Radiologists often describe FD as associated with a "ground glass matrix" [3]. However, FD is a complex disease, and knowledge of its unique pathogenesis and course is important for understanding imaging findings and potential complications; such as compression of adjacent structures. Surgery remains the primary radical treatment when performed safely and completely. [4, 5]

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