CASE REPORT

BILATERAL ELASTOFIBROMA DORSI: A RARE SOFT TISSUE TUMOR

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ABSTRACT
Elastofibroma, a rare, noncapsulated benign lesion usually arising beneath the rhomboid major and latissimus dorsi muscles subjacent to the inferior angle of the scapula. Recognition of the lesion is important as the differential diagnosis includes other benign and also malignant tumors. A 71-year-old woman was presented with a three year history of mild back pain and bilateral infraescapular swellings. Thorax computed tomography (CT) revealed two poorly circumscribed, heterogenous masses bilaterally located at the infraescauplar areas, and magnetic resonance imaging (MRI) confirmed the bilateral involvement. Both masses were excised and diagnosed as elastofibroma. Lesions located deep beneath the inferior tip of the scapula should arouse suspicion of an elastofibroma.

Keywords: Elastofibroma, Soft tissue tumors, Surgery

INTRODUCTION
Elastofibroma, a rare, noncapsulated benign entity, first described by Jarvi and Saxen in 1961, is characterized by the proliferation of fibrous tissue with elastin and occurs most often in the infraescauplar area of elderly women 1. This lesion usually arises beneath the rhomboid major and latissimus dorsi muscles subjacent to the inferior angle of the scapula, and it adheres densely to muscle, periosteum of ribs, and scapula like a malignant lesion 2. It often presents as a nontender mobile mass 3. Recognition of the lesion is important as the differential diagnosis includes other benign and also malignant tumors 4.
We herein report a case of a 71-year-old woman with bilaterally located elastofibroma dorsi, presenting with mild pain and a clicking or catching sensation with the arm motion.

**CASE REPORT**

A 71-year-old woman was admitted to our hospital with a three year history of mild back pain. The pain was described as a dull ache of gradual onset, around the infrascapular area bilaterally, which was worse on movement of the arm. Over the last two years, she has noticed two infrascapular swellings which would appear and disappear with movement of the arms. She had no other medical history except for a history of diabetes mellitus and hyperlipidemia, both under control with adequate medications.

Physical examination revealed two palpable masses, measuring about 6x6 cm on the left, and 5x4 cm on the right, located at the both infrascapular areas. There was a full range of movement of both shoulders with no neurological signs. Pain was reproduced mostly around the left shoulder when the arm was circumducted.

Initial investigations showed a normal full blood count, bone profile, and inflammatory markers. Chest roentgenogram presumed an extrathoracic mass and CT revealed two poorly circumscribed, heterogenous masses bilaterally located at the infrascapular areas (Fig.1, and Fig.2). MRI confirmed the bilateral involvement of the infrascapular soft tissue tumor (Fig.3, and Fig.4). The signal intensity in both lesions were similar to that of skeletal muscle interlaced with strands of fat.
The surgical approach included bilateral posterolateral incisions made over the lesion with the arms positioned to expose the mass under general anesthesia. A firm, rubbery, nonencapsulated, malignant tumor-like lesion measuring 8x7x4 cm was observed under the left latissimus dorsi muscle. The tumor was not attached to the periosteum of the underlying ribs, but was densely adherent to the striated muscle. Frozen section of the incisional biopsy disclosed a benign tumor rich from collagen fibers. Then, the mass on the right, measuring 6x6x3 cm, sharing similar features like the left one, was excised with sharp and blunt dissection. On histologic examination with hematoxylen-eosin staining, the tumors showed eosinophilic collagen and elastic fibers with aggregates of mature fat cells. Both masses were diagnosed as elastofibroma. The postoperative course of the patient was uneventful. She was discharged on the third postoperative day and remained well and disease-free two years after surgery.

DISCUSSION

Elastofibroma is a rare benign tumor of the connective tissue first described by Jarvi and Saxen 1. It occurs mostly in patients over 50 years old 2-4. Women are more commonly affected, and the back is the most frequent site 2,5. The lesion is usually located in the lower subscapular region, deep in the rhomboid and latissimus dorsi muscles, where it may be firmly attached to the chest wall 2. Elastofibroma dorsi is usually unilateral, and bilateral involvement occurs in only 10% of patients 2,4. Clinically, over 50% of the patients are asymptomatic and may present with a painless swelling, while fever is present with pain in 10% 4.

The origin of these lesions is not yet clear. It is considered to be a benign tumor in which elastic fibers had formed by abnormal elastogenesis 1 or a true dysplasia of the elastic tissue with excessive formation of elastic material by fibroblasts 6. There is no correlation with repetitive trauma and genetic theory in the development of elastofibroma dorsi 5. A multifactorial etiology may be more explanatory for elastofibroma 3.

MRI is the best non-invasive technique and most useful for diagnosis 4. On CT and MRI examinations, elastofibroma dorsi is a noncapsulated mass, with variably-defined borders, showing an heterogenous soft-tissue attenuation, mostly similar to the skeletal muscles, with linear interlaced low density streaks suggesting mature fat 5.

Surgical excision is recommended when it causes functional disability, compression symptoms, an asymmetric outline of the chest wall, or when it is more than 5 cm in diameter 2,5,8. Marginal excision carries a very low risk of recurrence 9.

In conclusion, elastofibroma dorsi is a rare, ill-defined, pseudotumoral lesion of the soft tissues. Lesions located deep beneath the inferior tip of the scapula should arouse suspicion of an elastofibroma. Making a differential diagnosis radiographically from other tumors of the soft tissues is possible with CT and MRI. Marginal excision carries a very low risk of local recurrence.

REFERENCES