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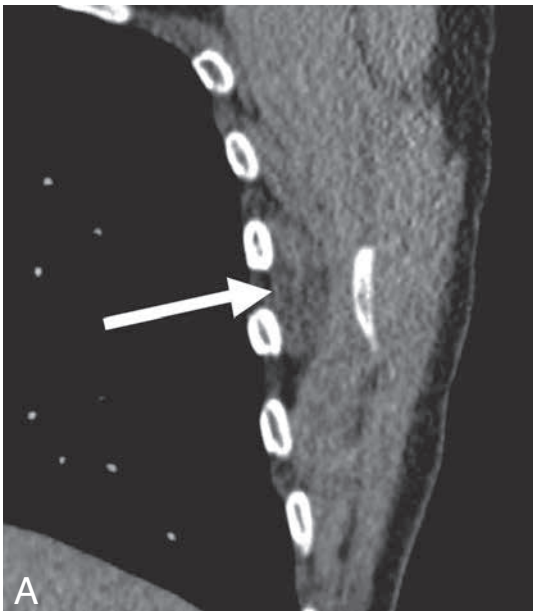
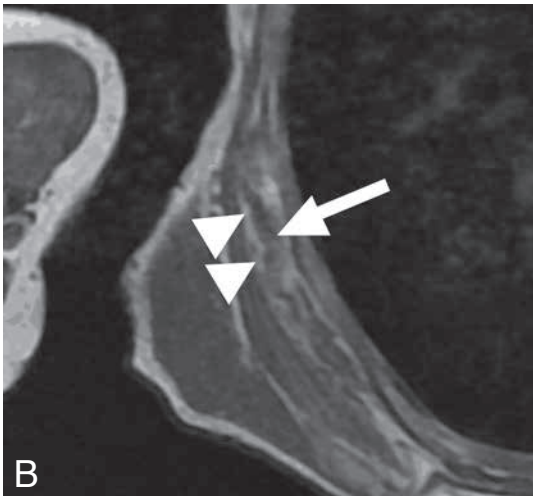
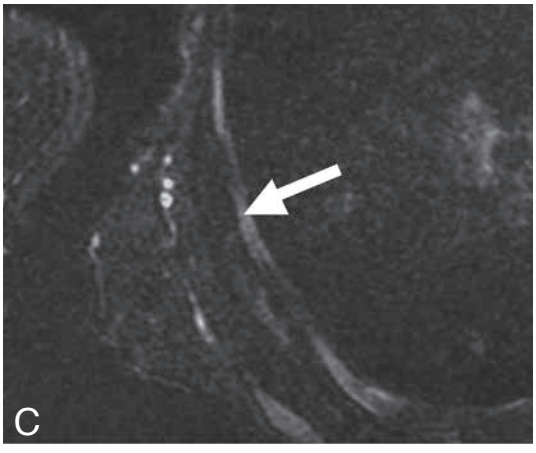
IMAGES IN CLINICAL RADIOLOGY







Bilateral elastofibroma dorsi: typical CT and MRI features

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An asymptomatic 57-year-old patient with a history of COPD was referred for a routine CT-scan of the chest. In addition to the changes caused by COPD, a bilateral soft-tissue lesion was observed deep to the inferior pole of both scapulas, just over the rib cage. The borders of the lesions were indistinct but the adjacent fat planes and bones were preserved. The lesions were heterogeneous presenting predominant areas of density similar to that of the adjacent muscles alternating with streaks of tissue with a fat density (Figure A). MRI better depicted these findings showing clearly an alternating pattern of fibrous tissue (arrows Figures B & C, respectively T1- and T2-Fat Sat) and fatty tissue (arrowheads Figure B). These observations are typical of an elastofibroma dorsi.

Comment

Elastofibroma dorsi is a slow-growing, benign soft tissue lesion that nearly always occurs at the inferior pole of the scapula. Other sites have been described but are rare. It is considered a pseudotumor or a tumor-like lesion, with no malignant transformation, occurring after the 5th decade. Less than half of patients present with symptoms, which are usually mild and consist of physical discomfort when moving the shoulder.

MRI is the imaging modality of choice as it beautifully shows the characteristic alternating pattern of fibrous and fatty tissue. The fibrous tissue is isointense relative to skeletal muscle on T1- and T2-weighted images, whereas the interspersed scattered or striated streaks of fatty tissue have a high signal intensity on T1-weighted images (arrowheads figure B). The margins may be sharp or indistinct. Size is variable with diameters that can exceed 5 cm. Post-gadolinium enhancement is noncontributory, ranging from subtle to marked. In up to 60%, it is bilateral. In the right clinical setting, these findings are sufficient to make the diagnosis of an elastofibroma dorsi without confirmation by biopsy.

Excision may be offered to symptomatic patients, with curative marginal resection. A wait-and-see approach is appropriate in asymptomatic patients, as was the case in this patient.

Reference

1. Malghem J., Baudrez V., Lecouvet F., et al.: Imaging study findings in elastofibroma dorsi. *Joint Bone Spine*, 2004, 71: 536-541.

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