Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Radiology

Elastofibroma Dorsi: A Case Report

Karifa Camara[1*], Salah Ben Elhend[1], Redouane Roukhssi[1], Nabil Hammoune[1], Abdelilah Mouhsine[1]

[1]Department of Radiology, Avicenne Military Hospital, Marrakech, Morocco

DOI: https://doi.org/10.36347/sjmcr.2025.v13i10.075 | **Received:** 28.08.2025 | **Accepted:** 10.10.2025 | **Published:** 24.10.2025

***Corresponding author:** Karifa Camara
Department of Radiology, Avicenne Military Hospital, Marrakech, Morocco

Abstract | **Case Report**

Background: Elastofibroma dorsi is a rare benign soft-tissue pseudotumor typically located in the infrascapular region, often discovered incidentally or during evaluation of a slow-growing mass. ***Case Presentation:*** We report the case of a 53-year-old woman who presented with a gradually enlarging, painless right infrascapular swelling of two years' duration. Clinical examination revealed a soft, ill-defined mass. Magnetic resonance imaging (MRI) demonstrated bilateral infrascapular poorly circumscribed lesions, isointense to skeletal muscle, with alternating linear hyperintense and hypointense streaks, consistent with elastofibroma dorsi, no Diffusion restriction or enhancement after gadolinium injection. ***Conclusion:*** MRI findings are often pathognomonic, allowing diagnosis without biopsy. Recognizing this entity is important to avoid unnecessary invasive procedures.

Keywords: Elastofibroma dorsi, infrascapular mass, MRI, benign tumor, case report.

INTRODUCTION

Elastofibroma dorsi (ED) is an uncommon benign fibroproliferative pseudotumor of the chest wall, first described by Järvi and Saxén in 1961 [1]. It usually arises beneath the inferior angle of the scapula, between the serratus anterior and latissimus dorsi muscles. The reported prevalence is around 2%, with a female predominance and most cases diagnosed after the age of 50 [2]. The lesion is often asymptomatic but may present as a slowly enlarging, subscapular swelling with or without discomfort. MRI is the imaging modality of choice, displaying characteristic alternating fibrous and fatty components that obviate the need for biopsy in typical cases.

CASE PRESENTATION

A 53-year-old female presented with a right infrascapular mass that had been progressively increasing in size over the past two years. The swelling was painless and did not impair shoulder mobility. Physical examination revealed a poorly defined, soft, mobile mass deep to the scapula.

MRI of the thoracic region was performed. On T1-weighted and T2-weighted images, the two lesions appeared as a fusiform, ill-defined soft-tissue mass located between the chest wall and the scapula. It was predominantly isointense to adjacent skeletal muscle, interspersed with alternating linear hyperintense and hypointense streaks parallel to the thoracic wall. These findings were highly suggestive of elastofibroma dorsi. No evidence of invasion of adjacent bone or pleura was seen.

Given the typical clinical and imaging features and the absence of symptoms, a conservative approach with regular clinical follow-up was recommended.

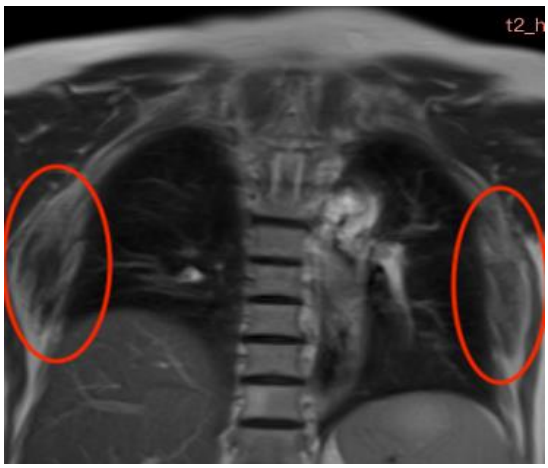

Figure 1: Coronal T2-weighted MRI showing bilateral infrascapular soft-tissue masses (red circles) with iso- to slightly hyperintense signal and linear hypointense streaks, consistent with elastofibroma dorsi.

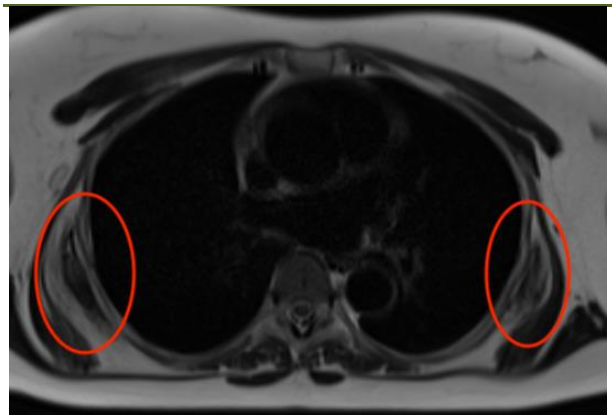

Figure 2: Axial T2-weighted MRI showing a poorly circumscribed fusiform mass in the right posterior chest wall (blue circle), isointense to muscle with interspersed linear striations, abutting adjacent musculature without rib or pleural invasion

DISCUSSION

Elastofibroma dorsi is a rare, slow-growing, benign pseudotumor that accounts for approximately 2% of primary chest wall tumors. It predominantly affects women over the age of 50 and is bilateral in about 50% of cases [2]. The pathogenesis remains debated, with proposed mechanisms including chronic mechanical friction, local ischemia, hereditary predisposition, and monoclonal genomic alterations.

Clinically, ED usually presents as a palpable infrascapular swelling, sometimes associated with snapping of the scapula or mild discomfort [3]. MRI is the gold standard for diagnosis. The pathognomonic imaging appearance consists of an ill-defined, lenticular soft-tissue mass with interspersed fatty and fibrous streaks, creating a "checkerboard" pattern. Post-gadolinium enhancement has been reported to vary from subtle to moderate, and in some cases, marked. The fasciculated pattern of elastofibroma dorsi on CT scan or MRI differentiates it from lipoma, desmoid tumor, and soft-tissue sarcoma/metastasis.

These features, when correlated with the typical location, are considered sufficient for diagnosis without histological confirmation [4].

Treatment is generally unnecessary in asymptomatic patients. Surgical excision is reserved for symptomatic cases, particularly when pain or functional limitation occurs. Recurrence after excision is rare, and malignant transformation has not been reported.

CONCLUSION

This case highlights the importance of recognizing the characteristic imaging features of elastofibroma dorsi, particularly on MRI, to establish a confident diagnosis without invasive procedures. For asymptomatic patients, conservative management with surveillance is appropriate.

REFERENCES

1. Järvi O, Saxén E. Elastofibroma dorsi. Acta Pathol Microbiol Scand Suppl. 1961;51(Suppl 144):83–4.
2. Battaglia M, Vanel D, Pollastri P, et al. Imaging patterns in elastofibroma dorsi. Eur J Radiol. 2009;72(1):16–21.
3. Nagamine N, Nohara Y, Ito E. Elastofibroma in Okinawa: a clinicopathologic study of 170 cases. Cancer. 1982;50(9):1794–805.
4. Nishio J, Isayama T, Iwasaki H, Naito M. Elastofibroma dorsi: diagnostic and therapeutic algorithm. J Shoulder Elbow Surg. 2012;21(1):77–81.