

Elastofibroma – A rare underdiagnosed benign tumor

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A 74-year-old male presented with a painless, gradually enlarging swelling over the left posterior chest wall for 2 years. General examination revealed a well-nourished, hemodynamically stable patient. Vital signs were within normal limits. On clinical examination, a firm, non-tender, deep-seated mass measuring 8 × 8 cm was noted between the scapula and chest wall. Magnetic resonance imaging (MRI) thorax with contrast revealed a well-defined subscapular lesion with mixed fibrous and fatty components and mild heterogeneous enhancement (Fig. 1). The mass was surgically excised. Macroscopically, the mass measured 8 cm and showed a white, rubbery cut surface with interspersed yellow adipose tissue (Fig. 2). Histopathology revealed dense collagenized stroma, mature adipocytes, scattered spindle to stellate fibroblasts, and numerous abnormal eosinophilic elastic fibers (Fig. 3a and b). Verhoeff-van Gieson stain confirmed these fibers as intensely black (Fig. 4). At 6-month follow-up, the patient remained asymptomatic with no recurrence.

Elastofibroma dorsi is an uncommon benign soft tissue tumor, predominantly found in elderly individuals, with a strong female predilection. It typically arises in the subscapular

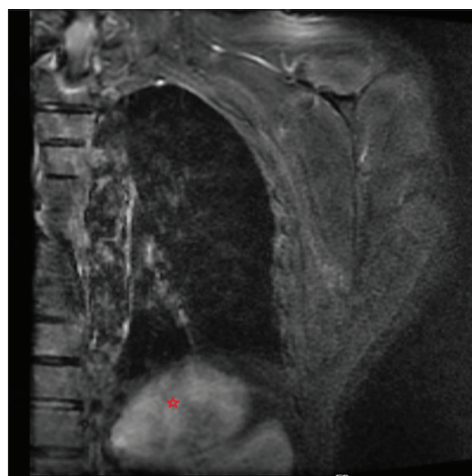


Figure 1: Magnetic resonance imaging thorax showing well-defined lesion in the subscapular region (red star)

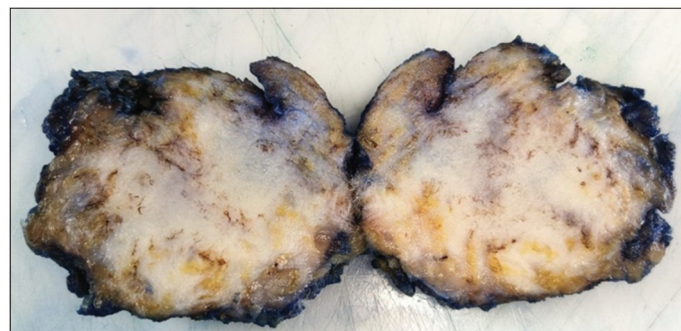


Figure 2: Mass with variegated cut surface

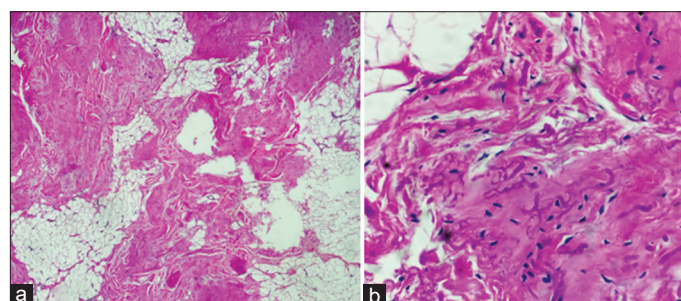


Figure 3: (a and b) Dense collagenized stroma interspersed with mature adipose tissue and numerous abnormal elastic fibers

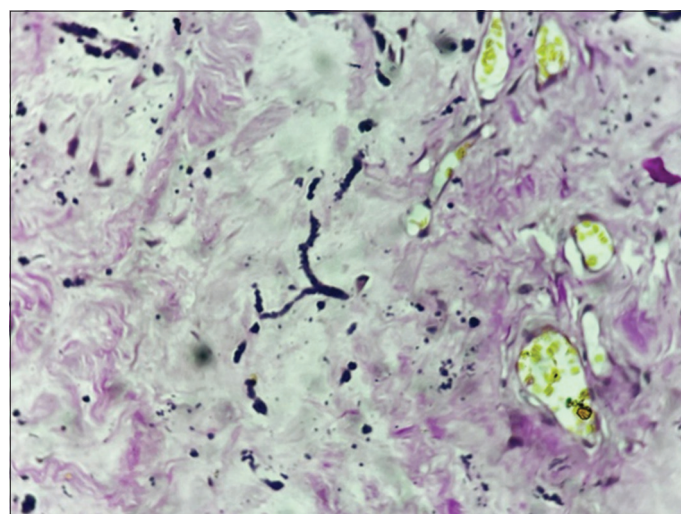



Figure 4: Verhoeff-van Gieson stain highlighting the elastic fibers

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or infrascapular region, often deep to the scapula and adjacent to the chest wall muscles [1]. Patients usually present with a slow-growing, firm mass, which may be asymptomatic or cause discomfort, especially with shoulder movement. Radiologically, MRI is the preferred modality, revealing a well-circumscribed lesion with alternating fibrous and fatty components, producing a characteristic “checkerboard” pattern. The lesion may show mild heterogeneous post-contrast enhancement [2].

Macroscopically, an elastofibroma appears as a circumscribed, rubbery mass. The cut surface shows a variegated appearance characterized by alternating gray-white fibrous tissue and yellow fatty streaks, producing a distinctive “thousand leaves” appearance. This gross morphology is a key diagnostic clue [3]. Histopathologically, elastofibroma demonstrates dense collagenized stroma interspersed with mature adipose tissue and numerous abnormal elastic fibers. The elastic fibers appear as coarse, irregular, eosinophilic globules and elongated structures with fuzzy outlines. Spindle to stellate fibroblasts are scattered throughout the lesion. No nuclear atypia, necrosis, or significant mitotic activity is observed. Elastic fibers can be distinctly highlighted using Verhoeff-van Gieson stain, appearing intensely black [4].

Management involves surgical excision, primarily in symptomatic cases. The lesion has no malignant potential, and recurrence is rare following complete removal [5].

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