

Bilateral Elastofibroma DorsiAldaqaq M^{1*}, Shukri K² and Hobishi ZA³¹Consultant Surgical Oncologist, Faculty of Medicine and Health Science, Taiz University, Taiz, Yemen²Faculty of Medicine and Health Science, Taiz University, Taiz, Yemen³National university, Taiz, Yemen***Corresponding author:**

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1. Abstract

1.1. Introduction: Elastofibroma dorsi (ED) is a benign, uncommon tumor, which appears in the subscapular and infrascapular region. Etiology is still under discussion. Total surgical excision is the optional treatment for symptomatic EFD.

1.2. Presentation of Case: A 48-year-old male patient presented with 2 years' complaint of shoulder pain and paresthesia, mostly aggravated with shoulder movements and infrascapular swelling bilaterally. Both masses were totally excised with bilateral posterolateral subscapular incision. Symptoms and significant discomfort from the surgical procedure was completely resolved within a few weeks' interval from the operation.

1.3. Discussion: it is a rare tumor, and its etiology suspected to be due to repetitive trauma and still under question, image is the best method to diagnose it.

1.4. Conclusion: EFD is a benign soft tissue tumor, placed at infrascapular region, treated with total simple excision, biopsy is not needed.

2. Introduction

Elastofibroma dorsi (EFD) was described firstly in 1961 by jarvi and Saxen, it is a benign, uncommon, soft tissue tumor which appears as an ill-defined mass in the subscapular and infrascapular region between the thoracic wall, serratus anterior, and latissimus dorsi muscle [1,2]. Etiology is still under discussion [1]. ED arises because of a disturbed fibroblastogenesis, due to chronic irritation or trauma as Nakamura et al proposed [3] also an association between repetitive trauma and the production of excessive amounts of elastic matrix by fibroblasts have been noted by several other authors [2,4] even by a certain genetic component [2]. The methods that have been used for diagnosis were ultra-sound, mag-

netic resonance imaging (MRI), and computed tomography (CT) [2,5,6]. Total surgical excision is the optional treatment for symptomatic EFD [2,7].

3. Case Presentation

Male patient was a 48-year-old who presented with a mass at the inferior angle of his left scapula presented for two years. Nine months earlier, the patient had presented with a slow-growing soft-tissue mass at the inferior angle of the right scapula. The patient did not report any history of trauma. During a 3-months period, the mass had become painful mostly left mass, paresthesia of left forearm with pressure feeling. He had a normal range of movement at both shoulders joint, power, tone and reflexes were normal bilaterally. His upper limb neurological examination was unremarkable; the masses were visible by hyper abduction. There was no significant family history for soft tissue tumors. CT scan was done, images displayed relatively symmetrical bilateral homogenous non-significant enhancement post contrast soft tissue lesion adjacent to the postero-lateral chest wall just beneath the inferior scapular angles, measured (75×30mm) AP&TV.

Operation is done under general anesthesia, both masses were totally excised with bilateral posterolateral subscapular incision with the patient lying in the prone position and with slightly abducted arm. The masses were macroscopically non capsulated, irregular and rubber-like. (Figure 1) Exploration of the left& right posterior thoracic wall at that time revealed symmetrical masses measured 10 cm x 9 cm x 4 cm which were deep to the latissimus dorsi muscle overlying the eighth, ninth, and tenth ribs. The masses were removed easily from the chest wall and ribs. Gross examination showed a firm irregular configuration with yellowish fatty area. The lesion was unencapsulated. The histopathologic examination of the specimens was consistent with Elastofibroma formed of be-

nign collagenous fibers in between adipose tissue.no atypia was noticed. 1st day post operation the patient complained of mild pain at operation site and shoulders, the drain was yielding 200ml of bloody stained content from both sides ,2nd day the drain content was 600ml bloody stained, there wasn't major complain he was discharged with the drain. During follow up on the fifth day the drain was removed, four days later a collection of seromas was formed bilaterally and it was aspirated, it was about 500ml, and then packed with bandage. There was a mild pain at shoulders without limitation of movement range, it was relieved with analgesics. Within a few weeks later symptoms and discomfort feelings followed the operation were resolved.



Figure 1: Macroscopic appearance of Elastofibroma

4. Discussion

Elastofibroma dorsi is a pseudo-tumoral lesion of mesenchymal origin, presumably of a reactive nature, which develops electively in the soft tissues of the periscapular region between the scapula and the chest wall [5]. It was defined in 2002 by the World Health Organization (WHO) of soft tissue tumors taxonomy as a benign fibroblastic/myofibroblastic tumor [8]. It has been known EFD to be a very slow-growing process. The fundamental question of pathogenesis of this lesion is still unanswered, because the presence of a type of collagen not normally found in reparative processes could be explained by either metaplastic or true neoplastic transformation [9]. It is observed in elderly subjects, mostly women, with a marked correlation with manual work carried out over long periods of time [5]. An EFD prevalence rises to 24% and is often observed among women in the fourth to sixth decades [2,10]. Although the EFD is usually unilateral, it is bilateral in 30% of

the cases [10]. It usually manifests as a palpable lump with pain on mobilization of the shoulder. Ultra- sound, magnetic resonance imaging (MRI), and computed tomography (CT) are useful for diagnosis [6].

Regarding the localization of elastofibroma, the vast majority of them are located in the subscapular and infrascapular region between the thoracic wall, serratus anterior, and latissimus dorsi muscles [8], it is the most criteria of EFD [11] as founded with our patient. Infrequent locations are also described, including mediastinum, stomach, peritoneum, ischial tuberosities, olecranon, deltoid muscle, intraspinal spaces, and foot [8,12]. Overall, subscapular topography, bilateralism, and typical imaging features including fluorodeoxyglucose (FDG) uptake pattern in the elderly are adequate for diagnosis of EFD, thus avoiding biopsies and unnecessary surgical resection [12]. Although usually unilateral, the EFD is bilateral in 10% of the cases [2] similar to that we report. Imaging studies are useful for diagnosis. An ultrasound shows in the echogenic fibroblastic background a mass that contains a lipid tissue in the form of scattered linear and curvilinear hypoechoic lines, and a multilayered appearance is characteristic of the EFD [2].

The CT scan reveals a heterogeneous soft tissue mass with muscular density, which contains low-density linear areas depending on the lipid tissue [2,11] but with our case it revealed homogenous non-significant enhancement post contrast soft tissue lesion (Figure 2).

The histological sections display a collagenous tissue, with eosinophilic elastic fibers fragmented into disks or globules, associated with mature fat cells, which is near to case that we present. It's significant to notice if there is atypia or mitotic activity, which distinguishes ED from other pseudotumors and neoplasms [1,8]. The differential diagnoses of periscapular lesions include desmoid tumors, neurofibroma, liposarcoma, soft tissue sarcoma, aggressive fibromatosis, and malignant histiocytifibroma [12,13]. These tumors due to neovascularization is usually substantial or heterogeneous and is significantly higher than that of EFD [11,12]. As lipoma is the most common met subcutaneous benign tumor, it is an important lesion in differential diagnosis and is frequently excised under local anesthesia [14].

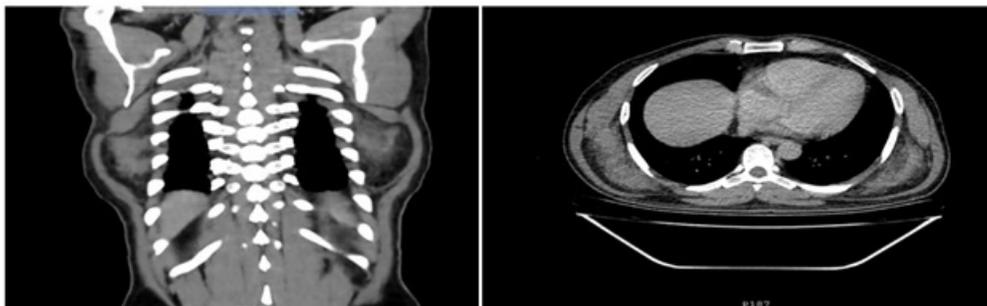


Figure 2: Computed tomography scan shows elastofibroma typical placement of bilateral periscapular region

5. Conclusion

EFD is a rare benign tumor which we don't face it too much, it must be differentiated from other malignant tumors, as it is characterized by special criteria as its site, bilateralism, and image description and could avoid the need for biopsy. Simple excision is confined to be the treatment for symptomatic EFD.

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