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RESEARCH ARTICLE

ELASTOFIBROMA DORSI. OUR EXPERIENCE AND LITERATURE REVIEW

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ABSTRACT

Background: Elastofibroma dorsi is a rare benign soft-tissue tumor with a characteristic location and imaging appearance. Aim of the study to present, strategy for treatment, operative technique and literature review. **Methods:** During a 7year period a retrospective study took place. Twelve (12) patients treated for Elastofibroma dorsi, at Thoracic Surgery Department at General Hospital of Nicaea-Piraeus Agios Panteleimon –and Department of Thoracic Surgery, Oncological Hospital of Kifisia-Agioi Anargyroi, Athens Greece. **Results:** Ten (10) female (83,333%) and two (2) male (16,667 %), aged 45-81 years mean age 69 years. Four female patients had bilateral tumor. All tumors were located infrascapular. **Conclusion:** Elastofibroma dorsi is a rare benign tumor seen in elderly patients. Located Infrascapular deep to the fascia and attachment to the ribs suggest the possibility of soft tissue sarcoma. Could be unilateral or bilateral. MRI may help in diagnosis especially if it is located bilateral. Biopsy usually performed to exclude soft tissue sarcoma. Surgical excision, marginal excision of the tumor can be performed when patient in pain with minimal morbidity. Minimal drainage required for almost two days. The radical surgical excision is the gold standard.

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INTRODUCTION

Elastofibroma dorsi is a benign soft-tissue tumor with a characteristic location and imaging appearance (Ochsner; Chandrasekar, 2008; Naylor, 1996). It is very rare (Ochsner; Chandrasekar, 2008; Naylor, 1996). It is also more frequently seen in older women (Ochsner; Chandrasekar, 2008; Naylor, 1996). Aim of the study to present our cases, strategy for treatment, operative technique and literature review.

MATERIALS AND METHODS

During a 7year period a retrospective study took place. Twelve (12) patients treated for Elastofibroma dorsi, at Thoracic Surgery Department at General Hospital of Nicaea-Piraeus Agios Panteleimon –and Department of Thoracic Surgery, Oncological Hospital of Kifisia-Agioi Anargyroi, Athens Greece.

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RESULTS

During a 7year period twelve (12) patients treated for Elastofibroma dorsi, ten (10) female (83,333%) and two (2) male patients (16,667 %), aged 45-81 years mean age 69 years. To mention that four female patients had bilateral Elastofibroma dorsi. Both of these female patients underwent unilateral tumor excision. The side was selected by the size and the gravity of pain.

All these patients underwent limited incision, excision of the tumor and drainage for two days. Hospital stay was two days. All patients had uneventful recovery, no seromas, no pain, no wound infection, no complication was noticed. Porto Vac (vacuum) we kindly suggest to keep for two days to avoid seromas. The site of occurrence was in the typical infrascapular region in our study population. No biopsy preoperative was performed. Biopsy performed postoperative in all patients. Seems that CT and MRI for the thorax considered gold standard for diagnosis.



Image 1. Elastofibroma dorsi located Infrascapular in a female patient.



Image 2. Elastofibroma dorsi post procedure.

DISCUSSION

Elastofibroma dorsi is a benign soft-tissue tumor. It is more frequently seen in older women around 65-70 years.¹ Elastofibroma dorsi is classically located in the infrascapular or and subscapular regions, deep to the serratus anterior and latissimus dorsi musculature (Ochsner; Chandrasekar, 2008; Naylor, 1996). May occur in axilla, ischial tuberosity, greater trochanter, posterior elbow, stomach, rectum, omentum, eye, hand and foot. Infra Unilateral masses have a slight right-sided predilection, but up to 30% of elastofibromas are bilateral (Ozpolat, 2008).



Image 3. Elastofibroma dorsi located Infrascapular on CT scan.

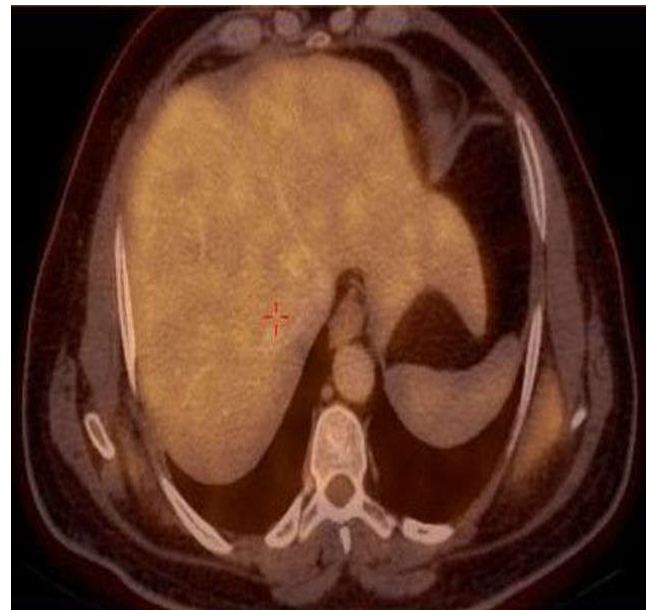


Image 4. Elastofibroma dorsi located Infrascapular.

It was first described by OH Jarvi and AE Saxon in 1959 (Naylor, 1996). In many cases the patients are asymptomatic, but up to 50% of patients describe localized symptoms including, pain especially on movement and sensation of clicking, snapping, or clunking of the scapula.

Radiographic features

Ultrasound: Ultrasound demonstrates a well-defined multi-layered pattern of hypoechoic linear areas of fat deposition intermixed with echogenic fibro elastic tissue.

CT: These masses typically appear as poorly defined soft-tissue masses with attenuation similar to that of the adjacent skeletal muscle. They are located in the infrascapular or subscapular region (Onishi, 2011; Soler, 1998).

MRI: The mass appears as alternating fibrous and fatty components. Although the borders of these masses are relatively well defined, no capsule can be identified. Could be located anterior or caudal to the inferior pole of the scapula, and deep into latissimus dorsi, serratus anterior, and rhomboid muscles (Onishi, 2011; Soler, 1998). The appearance of a soft tissue mass with signal intensity similar to skeletal muscle with

regions of alternating high and low signal intensities on T1 and T2 weighted spin echo sequences in the typical sub infrascapular location was diagnostic of Elastofibroma especially if the lesion was bilateral

- T1 fibrous component: isointense to muscle, fatty component: high signal
- T2 fibrous component: isointense to muscle fatty component: high signal
- T1 C+ (Gd): heterogeneous low level enhancement

PET-CT Elastofibroma dorsi frequently shows mild to moderate FDG uptake, which should not be misinterpreted as a malignant lesion (Onishi, 2011). Biopsy preoperative can confirm the diagnosis. No biopsy was done to none of our patients preoperative (Pierce, 2004). Seems that the CT, MRI for the thorax considered more than enough. Biopsy performed postoperative in all patients (Pierce, 2004).

Conclusion

Elastofibroma dorsi is a rare benign tumor seen in elderly patients (Ochsner; Chandrasekar, 2008; Naylor, 1996; Ozpolat, 2008). Located Infrascapular deep to the fascia and attachment to the ribs suggest the possibility of soft tissue sarcoma. Could be unilateral or bilateral (Ochsner; Chandrasekar, 2008; Naylor, 1996; Ozpolat, 2008). MRI may help in diagnosis specially if it is located bilateral. 6 Biopsy usually performed to exclude soft tissue sarcoma. 7 Surgical excision, marginal excision of the tumor can be performed when patient in pain with minimal morbidity (Chandrasekar, 2008; Soler; Pierce, 2004). Minimal drainage required for almost two days (Chandrasekar, 2008; Soler, 1998). The radical surgical excision is the gold standard (Chandrasekar, 2008; Soler, 1998; Yaldoo, 2018).

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