

ELASTOFIBROMA DORSI: OUR EXPERIENCE IN A TERTIARY CARE HOSPITAL OF HIMALAYAN REGION

Yawar Nissar^{1,a}, Lenah Bashir^b, Bashir Ahmad Bhat^a and Farooq Bhat^c

^a Senior resident, Department of Plastic and Reconstructive Surgery, GMC, Srinagar, India, ^b Lecturer, Department of Microbiology, GMC, Srinagar, India, ^c Lecturer, Department of Plastic and Reconstructive Surgery, GMC, Srinagar, India

ABSTRACT Introduction: Elastofibroma dorsi (ED) is a rare, benign, connective tissue tumour typically occurring in the posterior thoracic wall between serratus anterior and latissimus dorsi muscle adjacent to the inferior angle of the scapula. Actual aetiology remains unknown, and classical clinical features, which include swelling, pain and discomfort in the scapular region along with MRI, usually confirm the diagnosis. **Methods:** In our study, we described 11 patients with elastofibroma dorsi from 2014 to 2021 identified retrospectively treated with marginal excision. The patient's age, gender, lesion side, tumour size, and location were analysed in addition to intraoperative and postoperative complications. **Results:** The median age in our study was 58 years, with a male: female ratio of 0.57:1. The tumour was more commonly present on the left side, with pain being the most common symptom. The median size of the tumour was 7 cm. There were no intraoperative or postoperative complications. No recurrence was reported in any of the patients. **Conclusion:** Elastofibroma dorsi is an uncommon benign soft tissue tumour occurring in the infrascapular region of elderly patients. Typical MRI findings especially confirm benign elastofibroma. Excellent results with minimum morbidity are obtained with marginal excision. Prognosis is usually good with no recurrence.

KEYWORDS elastofibroma dorsi, soft tissue tumour, benign, chest wall tumour

Introduction

Elastofibroma dorsi (ED), described by Jarvi and Saxen^[1] in 1961, is a benign, connective tissue tumour. Typical sites of location include the posterior thoracic wall between serratus anterior and latissimus dorsi muscle adjacent to the inferior angle of the scapula. As it is very uncommon (<1% of chest wall tumours), it has not been reported much.^[2] Actual aetiology remains unknown, although it has been linked to aging^[3] and genetics since it is bilateral and runs in families in 30% of cases.^[4] Clinical features usually include swelling, pain and discomfort in the scapular region. MRI and CT scan to aid in diagnosis and reveal a bilateral or unilateral lesion, and biopsy confirms the di-

agnosis. MRI reveals a poorly circumscribed, heterogeneous soft tissue mass with gadolinium enhancement.^[5-7] In our study, we described 11 patients with elastofibroma dorsi who underwent marginal excision.

Material and Methods

It was a retrospective study conducted in the Department of plastic and reconstructive surgery from 2014 to 2021. We identified 11 patients with elastofibroma dorsi who underwent marginal excision. Patient's age, gender, Lesion side, tumour size, and location were analysed in addition to intraoperative and postoperative complications. Written and informed consent was sought from all the patients in the study. The study was cleared by the institutional ethical committee. All patients were subjected to preoperative MRI scans, and the final diagnosis was confirmed by biopsy. All patients were operated on under general anaesthesia in the prone position. In all of the patients, the latissimus dorsi muscle was split. A hard tumourous-like tissue was typically attached to the serratus anterior and rib periosteum in the infrascapular region. Marginal resection was done in all patients,

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¹ Corresponding author: Yawar Nissar, gaddaguy@gmail.com

and the wound was closed over a suction drain, usually kept for 2 days. Follow-up was done at 2 weeks, 1 month and then 3 monthly. Every patient was followed up for a minimum of 10 months.

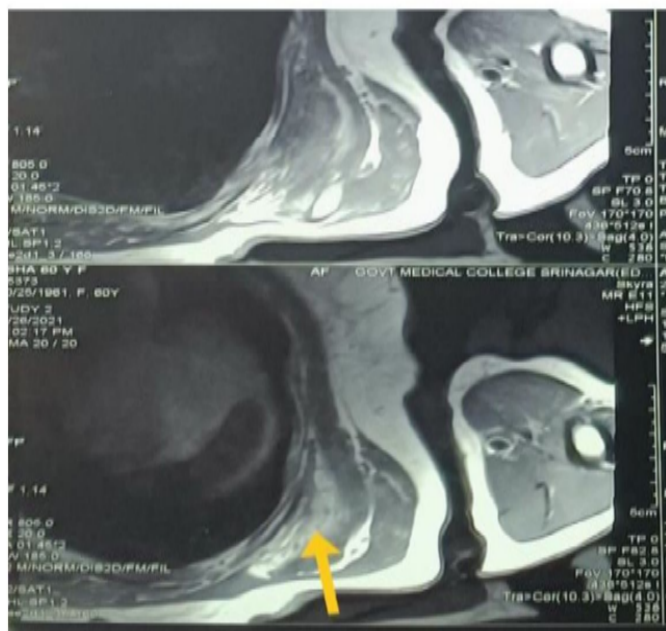


Figure 1 MRI scan demonstrating elastofibroma dorsi



Figure 2 Bulge in left scapular region during clinical examination

Results

The age of the patients ranged from 49 to 74, with a median of 58 years. There were 7 females and 4 males in our study with a male: female ratio of 0.57:1. The tumour was present on the



Figure 3 Intraoperative photograph demonstrating elastofibroma dorsi with its extension to rib periosteum



Figure 4 Surgical specimen of elastofibroma dorsi

left side in 7 patients, right side in 3 patients and bilateral in 1 patient. The pain was the most common symptom, followed by discomfort in the scapular region. Clinical examination revealed a firm swelling in the subscapular region which was of varying tenderness to non-tender in some. Size of the tumour varied from 5 to 10 cm, with a median of 7 cm. There were no intraoperative or postoperative complications. Biopsy of all tumours came out to be elastofibroma dorsi (mixture of fibroblasts, elastin and collagen with interspersed adipose tissue). No recurrence was reported in any of the patients.

Table 1

Serial number	Age (years)	Gender	Side	Size (cm)(maximum dimension)	Follow up (months)	Recurrence
1	56	Female	Left	10	11	Nil
2	58	Female	Bilateral	9	10	Nil
3	72	Male	Left	7	24	Nil
4	71	Female	Left	6	11	Nil
5	62	Female	Right	6	15	Nil
6	49	Male	Left	8.5	17	Nil
7	55	Male	Right	7	36	Nil
8	74	Female	Left	10	38	Nil
9	50	Male	Left	9	17	Nil
10	58	Female	Right	6	24	Nil
11	61	Female	Left	5	21	Nil

Discussion

Elastofibroma dorsi (ED) is a rare benign tumour of connective tissue. Our article discusses a series of 11 cases with elastofibroma dorsi. The tumour typically occurs in the posterior thoracic wall between serratus anterior and latissimus dorsi muscle adjacent to the inferior angle of the scapula; we had similar findings in our study without any exception. Historically some cases have been reported in other parts of the body, e.g. greater trochanter, stomach, hand, eye, and axilla.^[8] In our study, the age of the patients ranged from 49 to 74, with a median of 58 years. Elastofibroma dorsi primarily affects the elderly, over 55 years of age, with a mean age of about 60 years at diagnosis.^[9]

Chandrasekar CR et al.^[10], in their study of 15 patients, showed mean age at diagnosis as 68.4, which corresponds with our study. There were 7 females and 4 males in our study with a male: female ratio of 0.57:1. Deveci MA et al.^[11], in his study of 61 cases, showed a male: female ratio of 0.13 : 1, which is concurrent to our study. Elastofibroma dorsi unanimously is present more frequently in women rather than men (F: M ratio 3.9: 1).^[9] The tumour was present on the left side in 7 patients in our study, right side in 3 patients and bilateral in 1 patient. Bilateral elastofibroma dorsi has been reported to be quite common, up to 50% in some studies.^[9,12] This may be attributed to the small number of cases in our study, which don't depict the actual prevalence in our population. Contrary to our study, the right-sided lesion was found to be more common in a study by Deveci MA et al.^[11] The pain was the most common symptom, followed by discomfort in the scapular region. In concordance with our study, Majó J et al.^[2], in their study of 10 patients, showed that pain and snapping scapula were the most common symptoms. The size of the tumour varied from 5 to 10 cm, with a median of 7 cm. Similarly, a study by Chandrasekar CR et al.^[10] showed the size of tumours varied in size from 3 to 10 cm, with an average size of 7 cm. No recurrence was reported in any of our patients. Analogous to our study, studies by Chandrasekar CR^[10] and by Deveci MA et al.^[11] showed no recurrence in their studies. Recurrence is extremely uncommon and has been historically attributed to incomplete excision.^[13,14] Moreover, there

has been no documentation of malignant transformation.^[9,15]

Conclusion

Elastofibroma dorsi is an uncommon benign soft tissue tumour occurring in the infrascapular region of elderly patients. Clinical features and typical MRI findings usually confirm elastofibroma. Excellent results with minimum morbidity are obtained with marginal excision. Marginal excision of the lesion can be performed with minimal morbidity. Prognosis is usually good with no recurrence.

Conflict of Interests

The authors declare that they have no conflict of interests.

Consent

Written informed consent was obtained from the all the patients for the study.

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