Case report
Scapular osteochondroma with reactive bursitis presenting as a chest wall tumour

Michael J. Shackcloth*, Richard D. Page
The Cardiothoracic Centre, Thomas Drive, Liverpool L14 3PE, UK
Received 24 February 2000; received in revised form 27 June 2000; accepted 18 July 2000

Abstract
A 32-year-old male presented with a painful, rapidly enlarging chest wall mass. A malignant chest wall neoplasm was suspected. A CT scan was performed which showed a mass extending from under the scapular and an exostosis arising from the anterior surface of the scapular. The mass and exostosis were resected resulting in complete resolution of symptoms. Histological examination showed the mass to be a reactive bursa, with no evidence of neoplasia. © 2000 Elsevier Science B.V. All rights reserved.

Keywords: Chest wall mass; Scapular osteochondroma; Reactive bursa

1. Introduction
A 32-year-old male presented with a large right-sided chest wall mass. He gave a 6 month history of pain in the lower posterolateral aspect of the right chest wall. The pain was constant, with no aggravating and relieving factors, and was severe in nature requiring opiates. There was no history of trauma or any systemic symptoms present.

He gave a past history of having a right nephrectomy for a nephroblastoma as a neonate and a right orchidectomy for an undescended testicle.

On examination there was a 20 × 10 cm fluctuant tender mass on the right side of the chest wall. Chest X-ray showed some calcification in the soft tissues posterolaterally. CT scan showed an extensive fluid filled mass extending from under the anterior border of the scapular posteriorly, covering most of the posterior aspect of the scapula. There was also an exostosis arising from the anterior surface of the scapular (see Fig. 1).

A biopsy of the mass was carried out via a 4 cm lateral incision. It was found to contain a large volume of serous fluid. There was an irregular bony spur arising from the anterior scapular projecting medially for 5 cm. Histology showed the wall of the cyst to contain dense fibrosis with focal non-specific inflammation that was said to be compatible with trauma. There was no evidence of neoplasia. After biopsy the swelling decreased in size and the pain decreased.

Over the next month the mass increased in size rapidly and the pain became severe requiring hospital admission. The mass was therefore resected. At operation there was a 15 × 10 cm cystic mass arising from the outer surface of the 4th and 5th ribs. There was a bony exostosis arising from the

Fig. 1. CT scan showing enlarged bursa and osteochondroma.
anterior surface of the scapula. Both cyst and exostosis were excised.

Histology revealed the cyst to consist of a fibrotic connective tissue partly lined by vascular synovium. The exostosis was an osteochondroma (see Fig. 2).

Post-operatively he made a good recovery and was discharged home on day 3 requiring only paracetamol for pain. He currently remains well without symptoms or residual mass 9 months later.

2. Comment

A reactive bursa secondary to an osteochondroma of the scapular is rare. McWilliams first reported it in 1914 [1]. To the best of our knowledge only two other cases have been reported since [2,3]. Osteochondromas are the most common bone tumour except for non-ossifying fibromas. In the autosomal dominant condition hereditary multiple exostosis scapular exostoses are present in 45% of people [4]. They usually cause no morbidity. Symptoms are unusual but if present result from pressure on adjacent structures, interference with joint movement or due to reactive bursa formation. Rarely pain may signify malignant change. This occurs more commonly in multiple lesions (5–25%) than in solitary lesions (1–2%) [5].

There are four bursae connected with the scapulothoracic articulation [6]. There is an inconsistent bursa in the superficial layer between the inferior angle of the scapular and the superior fibres of latissimus dorsi. The next bursa lies between the superomedial scapular and the overlying trapezius. In the deep layer of tissues there are two bursae, one between serratus anterior and subscapularis, and one between the serratus anterior and the thoracic cage. It was the latter of these bursae which was enlarged in our patient.

There is a wide range of possible differential diagnosis of a chest wall mass. Pain in a chest wall mass arouses the suspicion of malignancy. CT scanning is of value in establishing the homogenous nature of the contents of the bursa as well as evaluating the exostosis itself for signs of malignant change [7]. The use of ultrasonography has been reported to be useful in the diagnosis of reactive bursa [8] and in retrospect may well have been helpful in this case.

In any chest wall mass it is important to establish the histological diagnosis to either confirm or exclude the presence of malignancy. Once the definitive diagnosis has been made appropriate treatment can be planned. In this case surgical excision of the osteochondroma allowed the scapula to move freely over the underlying ribs and intercostal muscles with subsequent resolution of the pain and bursitis. The latter had presumably been caused by friction between the osteochondroma and the underlying bursa.

References