Unusual causes of scapular clicking
Lymphangioma of the thoracic wall and aneurysmal bone cyst of the scapula

Abstract Scapular clicking with shoulder motion has been described for a variety of conditions. Two unusual cases, a lymphangioma of the thoracic wall in a 42-year-old man and an aneurysmal bone cyst of the scapula in an 8-year-old boy, are presented. The lymphangioma was treated by marginal excision of the lesion and the aneurysmal bone cyst, by excision of the infraspinal portion of the scapula with resolution of symptoms.

Introduction
Scapular clicking with shoulder motion is a well-recognized symptom of lesions about the scapula. It is usually caused by a space-occupying lesion between the scapula and the thoracic cage, the most frequent one being an osteochondroma. Two unusual cases, an aneurysmal bone cyst of the scapula and a lymphangioma of the thoracic wall, are presented.

Case reports

Case 1
A 42-year-old, right-handed, male laborer presented with a painful click of his left shoulder between 30 and 60 deg of passive and active abduction. His symptoms had started 4 months before the clinical evaluation and had steadily worsened. His physical examination revealed a slight atrophy of the left supraspinatus muscle and was unremarkable except for the painful click accompanied by a jerk at the previously mentioned range of abduction. There was no winging of the scapula at rest, and no palpable mass could be de-

Fig. la, b Sagittal and transverse magnetic resonance imaging (MRI) sections of the lesion adjacent to the thoracic cage, between the fibers of the serratus anterior muscle
Fig. 2 a, b Histology of the lesion with dilated lymphatic channels lined with a single flattened layer of epithelium, surrounded by loose connective tissue and some smooth muscle fibers in the stroma (hematoxylin-eosin; a × 58, b × 29)

tected. Plain X-rays of the scapula in two planes were normal. Blood chemistry findings were within normal limits. A soft-tissue mass under the scapula was suspected, and magnetic resonance imaging (MRI) of the scapula was performed. MRI revealed a soft-tissue mass of 6 × 3 cm on the thoracic wall under the fibers of the serratus anterior muscle at the level of the inferomedial border of the scapula (Fig. 1). The lesion had well-defined borders, and no invasion to surrounding structures was noted. The scapula was normal. At surgery, a white-yellow mass of rubbery consistency that seemed to originate from the bone was found. The lesion was without a capsule, situated along the longitudinal axis of the rib and could easily be separated from the surrounding muscle mass, but was firmly attached to the periosteum of the rib. A marginal excision of the lesion including the periosteum was carried out. The underlying cortex was intact. Histological examination revealed the lesion to be a lymphangioma (Fig. 2). The patient experienced immediate relief of symptoms and was still asymptomatic at 14-month follow-up.

Case 2

An 8-year-old boy presented with a steadily enlarging mass on his left scapula. The parents had first become aware of the lesion 14 months before the visit. A palpable, slightly tender mass measuring 11 × 7 × 4 cm was noted on the body of the scapula, inferior to the spine. Abduction-rotation of the shoulder produced a click as the infraspinatus and the teres minor muscles moved over the mass. Plain X-rays demonstrated an expansile lesion with ill-defined borders, projecting posteriorly from the body of the scapula. A computed tomography (CT) scan showed a cystic lesion, with thin but definite osseous borders (Fig. 3a). The anterior wall of the scapula was intact. A technetium-99m total-body bone scan demonstrated an increased uptake confined to the scapula; the scintigraphic margins were the same as the radiological margins (Fig. 3b).

Fig. 3 a Computed tomography showing a posteriorly expanding lesion of the left scapula with thin osseous borders divided by multiple discrete septae. b Technetium-99m scintigraphy of the patient with increased uptake localized to the scapula

Fig. 4 Histological section of the lesion with characteristic blood-filled lacunae divided by osteoid septae with an abundance of giant cells (hematoxylin-eosin, × 100)