Introduction

Elastofibroma dorsi is a benign connective tissue proliferation of unknown etiology on the thoracic wall, presenting typically as a nontender mass in elderly patients. Since first description of this lesion by Järvi and Saxen in 1961, more than 170 cases have been documented on this subject [1-4]. In most cases, it is unilateral. Bilateral involvement is present in approximately 10% of the patients [5]. Although a large number of pathologic series exist, to our knowledge, only few reports on appearance of bilateral elastofibroma dorsi on computed tomography (CT), magnetic resonance imaging (MRI) and its surgical result have been published in the literature [6,7]. In this article, we describe an additional case having bilateral subscapular masses.

Case

A 39-year-old woman was admitted to our clinic with bilateral, painful parascapular soft-tissue masses that had been present for two years. She had a history of recurrent left-sided subscapular pain for two months and clicking sensation mainly occurring during elevation of arm but her range of motion was not limited. Physical examination revealed bilateral soft tissue masses in sizes of 8x7 cm on the right and 9x8 cm on the left side consequently. They were resected completely. On histological examination, they exhibited a mixture of intertwining collagen and elastic fibers. We believe that a surgeon should always consider elastofibroma dorsi when palpate a mobile mass under scapula even in the younger patients.
attached to the rib periosteum and lower portion of the scapula were resected bilaterally. At the last follow-up a year after the operation, she was doing well and there were no symptoms or signs of recurrence. Macroscopically, they were not encapsulated and were firm, but elastic with an irregular configuration. The cut surfaces appeared to be fibrous whitish-yellow. On microscopic study, sections from the both sides were stained with Verhoeff’s elastic van Gieson stain. Both of the tumors exhibited a mixture of intertwining swollen, red collagen and fibriform type or minor globular-type elastic fibers seen as black. Occasional fibroblasts were identified between them. Islands of mature adipose tissue varying in size were found within the proliferation (Figure 4).

Discussion

Since its first description by Järvi and Saxen in 1961 [1], elastofibroma has been known as a rare benign tumor of unknown pathogenesis seen mostly in the elderly people. Although it is commonly found in the subscapular region beneath the rhomboid and latissimus dorsi muscle at the level of the sixth through eight ribs, uncommon locations have also been reported including, infraolecranon and subscapular region [1,4]. There are also a few reports of involvement at other sites including greater trochanter, deltoid region, ischial tuberosity and even tricuspid valve [4]. Although bilateral involvement has been reported approximately 10% of patients, it is usually unilateral [4,5]. Our patient had bilateral mobile solid masses under the scapula and there was no tumor at any other sites of

Figure 1. Axial CT scan of the patient showing bilateral soft-tissue masses immediately superficial to costal cage but deep in relation to latissimus dorsi and serratus anterior muscles. Scapular tip was seen on the right side adjacent to the tumor.

Figure 2. MRI images of the mass on the right side with a soft-tissue signal intensities similar to those of the adjacent skeletal muscle. It is interlaced with strands of fat.

Figure 3. MRI images of the mass beneath the periscapular musculature on the left side. It has a signal intensity similar to that of the surrounding muscles with a heterogenous composition of fibrous and adipose tissues.
The imaging features of elastofibroma dorsi have been characterized in recent years [6,8]. Plain radiographs generally show no evidence of a soft tissue tumor. It usually of little value in diagnosing elastofibroma dorsi, occasionally it may show an characteristic appearance that includes streaky layers of soft tissue that are similar in signal intensity or attenuation to skeletal muscle and that are interspersed with areas of fat. CT scan of our patient revealed poor differentiation of tumor edges from surrounding muscles on the both sides. On MRI images, low signal intensities were found in both of the tumors in this case, which reflect the fibrous and collagenous nature of the masses and high signal intensities would reflect the presence of the fat tissue. Although elastofibromas has been known a tumoral mass seen generally in the elderly people past the age of 55 years [2,5,6], it was rarely reported in the younger ones [3,8]. Majo et al [3] revealed two women having unilateral elastofibroma dorsi aged of 45 in their study. Our patient was 39-years-old and she was interesting being one of the few young patients having bilateral mass. We believe that a surgeon should always consider elastofibroma dorsi when palpate a mobile mass under scapula or see a heterogeneous mass between latissimus dorsi muscle and bony thorax on either CT or MRI even in younger patients. Complete resection is the best treatment when the lesion was symptomatic.

References