

Operative Management in a Patient with Scapulothoracic Bursitis

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Scapulothoracic bursitis, an uncommon lesion, has been reported to be a painful disorder of scapulothoracic articulation. The articulation may become inflamed secondary to trauma when overused because of sports or work that requires repetitive or constant movement of the scapula against the posterior chest wall. The bursitis usually appears as a growing mass at the scapulothoracic interface and is often confused with a soft tissue tumor. We report on a patient with scapulothoracic bursitis who underwent surgical excision.

Key words: 1. Thoracic wall
2. Synovial bursa
3. Pseudotumor

CASE REPORT

A 58-year-old male patient presented with a rapidly growing mass at the right posterior chest wall for one month. Initially, the patient had found an egg-sized lump at his right posterior chest wall. The patient received acupuncture at an oriental medicine clinic 10 days before admission. The soft mass showed relative hardening and rapid growth after the acupuncture.

In the physical examination, an approximately 5-cm mass was palpable at the right posterior lateral chest wall around the inferior angle of the scapula. The mass was mild and tender, without heat or redness. The patient had no history of trauma and had played golf excessively for the last six months.

Chest radiograph showed no bony abnormality or lung infiltration. Chest computed tomography showed a heterogeneous cystic mass on the right chest wall. A magnetic reso-

nance axial T1-weighted image showed a well-demarcated lenticular mass lesion located in the right subscapular region between the serratus anterior muscle and the thoracic rib cage (Fig. 1).

We first recommended sonographically guided aspiration; however, the patient refused to undergo this procedure because of the possibility of recurrence after aspiration and rapid growth of mass. Excision of the mass was performed under general anesthesia. The patient was placed in a left lateral decubitus position. The latissimus dorsi and serratus anterior muscle were dissected after an incision was made over the right subscapular area. A soft, movable scapulothoracic mass, which was loosely attached between the serratus anterior and the intercostal muscle, was observed.

A well-encapsulated cystic mass measuring 8×5×5 cm in size was excised. A hemorrhage occurred, which was suspected to be a result of acupuncture in an oriental medicine clinic (Fig. 2). A histopathologic examination showed a pseu-

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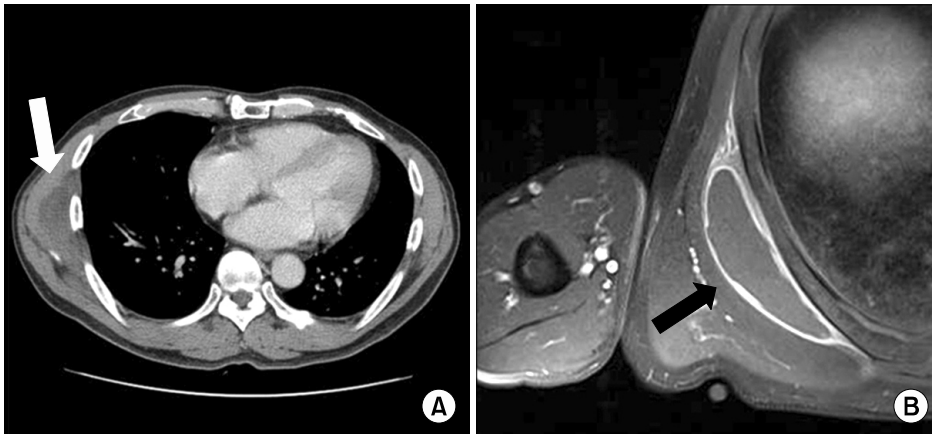


Fig. 1. (A) Chest computed tomography shows a heterogeneous cystic mass measuring approximately 8×2.5 cm on the right chest wall lateral aspect inferior latissimus muscle (white arrow). (B) A magnetic resonance axial T1-weighted image revealed a well-defined cystic mass located in the right subscapular region (black arrow).

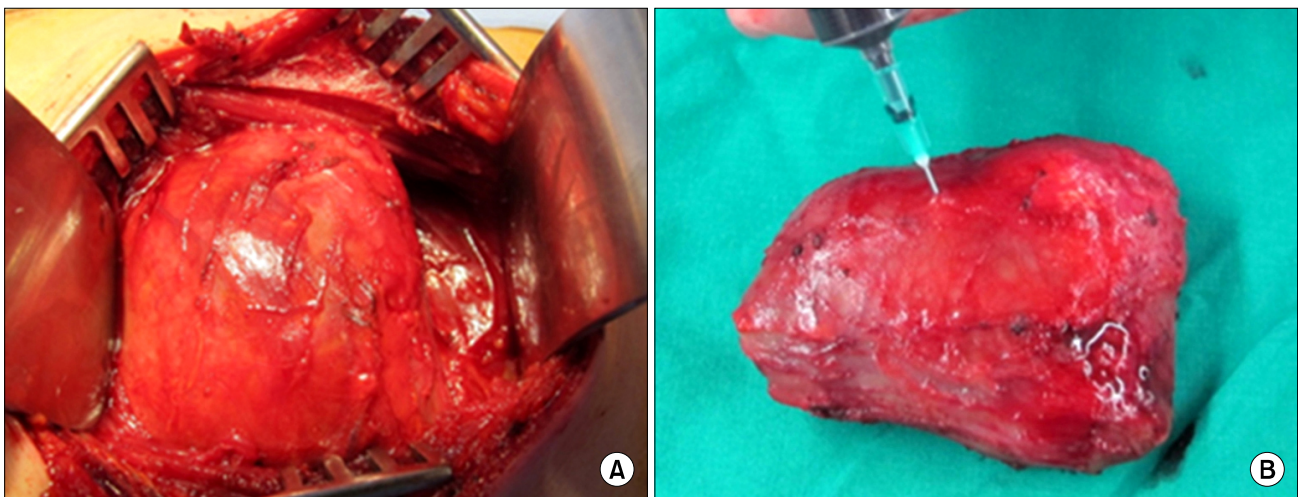


Fig. 2. (A) Operative findings show a soft, movable mass loosely attached to the chest wall. (B) A well-encapsulated cystic mass measuring 8×5×5 cm contained blood.

docyst with a thickened fibrotic wall, which was filled with blood clots. Many lymphocyte proliferations were observed in the cystic wall without neoplastic cells (Fig. 3).

This patient’s history included playing golf, pathological features, and radiological images; therefore, this patient was diagnosed with scapulothoracic bursitis. The patient recovered well after surgery. No chest wall pain was observed, and no recurrent mass was found at the 10-month follow-up. The patient still enjoys playing golf.

DISCUSSION

There are many anatomic and adventitial bursas of the

scapulothoracic articulation. Two major (anatomic) and four minor (adventitial) bursas have been described for the scapulothoracic articulation. These bursas allow a gliding scapulothoracic motion [1,2]. The major bursas include the scapulothoracic bursa (also called the infraserratus bursa) and the subscapularis bursa. The former is located between the serratus anterior muscle and the chest wall, and the latter is located between the serratus anterior muscle and the subscapularis muscle [1]. These bursas can become inflamed secondary to trauma when overused during sports (e.g., throwing, swimming, tennis, and golf), or work that requires repetitive or constant movement of the scapula against the posterior chest wall [2].

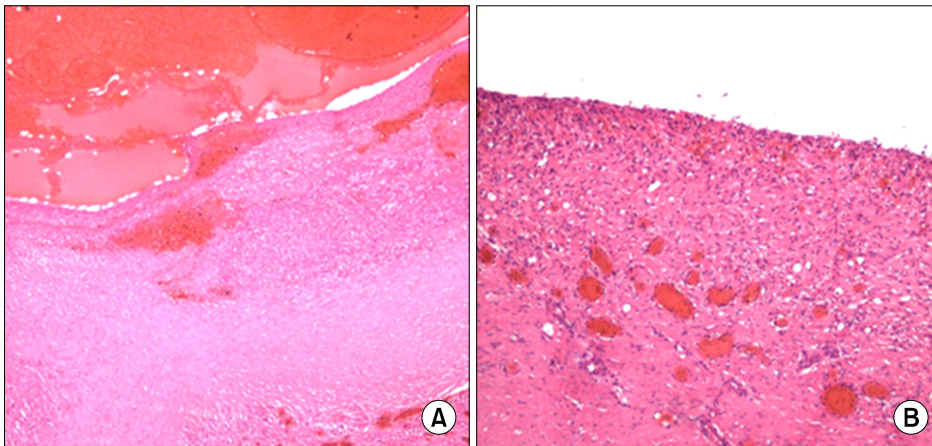


Fig. 3. (A) The microscopic findings of the mass show a pseudocyst with hemorrhage (H&E, $\times 100$). (B) The synovial membrane was lined with a single row of cells with elliptical nuclei. Many lymphocytes and mononuclear cells infiltrated into the sub-intimal layer, along with a moderate degree of fibrosis and congestion (H&E, $\times 200$).

Trauma may be directly caused, as an injury from a motor vehicle accident, or caused indirectly, as a result of a fall to an outstretched extremity that injures the soft tissues of the scapulothoracic articulation [1,2]. Clinical evaluation of the painful shoulder begins with a thorough history check and physical examination. Patients most often complain of pain with increasing activity and may have audible and palpable crepitus with the motion of the scapula. A history of overuse during sports, such as pitching, swimming, and weight training, has been implicated in the onset of symptoms, as has work and local trauma.

Chest computed tomography and magnetic resonance imaging are useful for the differentiation of distended scapulothoracic bursitis from neoplasms. The lesion usually appears as a well-demarcated cystic mass between the serratus anterior muscle and the chest wall. Differential diagnostic considerations of chest wall masses in the scapulothoracic region include elastofibroma, abscess, hematoma, and sarcoma, such as malignant fibrous histiocytoma, and liposarcoma [1]. Magnetic resonance imaging is more useful for distinguishing between scapulothoracic bursitis and the soft tissue tumor of the chest wall because the recognition of hemorrhagic findings in the bursa is easier. Ultrasonography and fine-needle aspiration biopsy may also be useful [1,3].

Conservative treatments for scapulothoracic bursitis, including rest, shoulder exercises, anti-inflammatory drugs, and intracystic injection of a long-acting corticosteroid or ethanol, are highly effective in most cases of scapulothoracic bursitis [2]. Surgical treatment may be indicated, if an appropriate tri-

al of non-operative treatment proves to be unsuccessful. Operative options include partial scapulectomy and open bursectomy [2,4]. The bursa and any osteophytes can be excised through an oblique incision made just distal to the inferior angle of the scapula. Recently, the excision of the bursa using minimally invasive surgery such as an arthroscopic technique has been used repeatedly [5].

In conclusion, this report describes an unusual pathologically proven case of scapulothoracic bursitis. Precise diagnosis is necessary for differential diagnosis of the distended bursa from a soft tissue tumor. Scapulothoracic bursitis may be considered in any patient with a chest wall mass below the scapula.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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