Spontaneous sternoclavicular joint infection

Cabir YÜKSEL, Ayten KAYI CANGIR, Şevket KAVUKÇU


ÖZET

Spontan sternoklaviküler eklemin infeksiyonu


Anahtar Kelimeler: Sternoklaviküler eklem, infeksiyon, spontan.

SUMMARY

Spontaneous sternoclavicular joint infection

Yuksel C, Kayi Cangir A, Kavukcu S

Department of Thoracic Surgery, Faculty of Medicine, Ankara University, Ankara, Turkey.

Spontaneous infection of the sternoclavicular joint (SCJ) is an uncommon clinical entity. There are only few reports about this entity in the literature. Various risk factors are found to be associated with SCJ infection but rarely no risk factors can be detected. As a result of its rarity and confusing with malignancies, the description of this condition is primarily in the form of case reports and small series in the literature. Besides, optimal therapy has not been described definitively. We present a case of spontaneous SCJ infection treated successfully by drainage and the use of nonsteroidal antiinflammatory drug.

Key Words: Sternoclavicular joint, infection, spontaneous.

Yazışma Adresi (Address for Correspondence):

Dr. Cabir YÜKSEL, Ankara Üniversitesi Tıp Fakültesi, İbn-i Sina Hastanesi, Göğüs Cerrahisi Anabilim Dalı, 06100 Sıhhiye, ANKARA - TÜRKİYE
E-mail: yukselcabir@hotmail.com
Spontaneous infection of the sternoclavicular joint (SCJ) is an uncommon clinical entity. There are only few reports about this entity in the literature (1-6). Various risk factors are found to be associated with this type of infection. These factors are: diminished host immunity, the presence of indwelling central venous catheters, intravenous drug abuse and chronic debilitating illness such as diabetes mellitus or liver failure or an overwhelming acute illness such as sepsis from a remote site (1-3,7,8).

Various microorganisms for SCJ infection have been determined, such as staphylococcus, group B streptococcus, gram-negative organisms. Besides during aspergillus infections and brucellosis SCJ infection has been reported (1-3).

The patient usually suffer from unremitting pain in the joint and fever. Some patients may demonstrate insitability of the joint and have difficulty lifting objects. The diagnosis of the SCJ infection is difficult thus, routine radiographs are not helpful and computed tomography (CT) scans may be of little help. Magnetic resonance imaging (MRI) is a more sensitive tool than CT for detecting joint disease and the joint as well as the soft tissue swelling is more clearly defined (1).

We present a case of SCJ infection who had no risk factors and the etiology was miscellaneous.

CASE REPORT

A 70 year old man admitted to our hospital with a progressively enlarging left sternoclavicular subcutaneous tenderness, one month duration. Physical examination revealed a palpable mass, about 5 x 6 cm diameter located at the left sternoclavicular joint. White blood cell and erythrocyte sedimentation rate were elevated 6000/µL and 52 mm/hour respectively. There was no sign of the mass on the chest roentgenogram (Figure 1A). MRI was performed in order to demonstrate the relation of the lesion with mediastinal structures. MRI showed destruction of the medial end of the left clavicle and there was tissue swelling around the clavicle, anteriorly and medially, extended to retrosternal area region. No mediastinal collections were found (Figure 2A, 2B). The bone scan showed that increased focal osteoblastic activity on the left sternoclavicular joint region (Figure 1B).

The needle aspiration biopsy of the mass on the SCJ was performed for diagnosis. The obtained sample was less than 1 mL and it was used for culture and cytolological examination. *Staphylococcus aureus* grew on the culture. The patient was treated with nonsteroid antiinflammatory drug (NSAID) and intravenous antibiotics (amoxicillin + clavulanic acid). Approximately 12 hours after the needle aspiration, purulant material (~2-3 mL) was drained on aspiration site. Subsequently, the mass was explored and packed open with small incision because of possibility of abscess formation. But there was no drainage after incision. The mass did not reveal any fluid or collection, but there was inflammation. Thus NSAID and parentheral antibiotics were continued for

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**Figure 1.** There was no sign of the mass on the chest roentgenogram (A), bone scan- Increased focal osteoblastic activity on the left sternoclavicular joint region (B).
three weeks. There were no ARB on the cultures. After the initiation of the therapy the swelling progressively diminished and completely disappeared at the 10th day. The patient was still doing well at his last follow-up 8 months.

**DISCUSSION**

SCJ infections remain an unusual clinical problem. As a result of its rarity, the description of this condition in the literature is primarily in the form of case reports and small series and optimal therapy has not been defined (4-6,9,10).

Various factors have been identified as predisposing to the development of SCJ infections. These include a history of chronic disease such as chronic renal failure, diabetes mellitus, or any factor which renders patients immunocompromised such as the prolonged use of corticosteroids. In addition, SCJ infections have also been observed in some patients, who have indwelling subclavian venous catheters, a history of intravenous drug abuse, or recent surgical procedures which could potentially be a source of bacteremia (1,2,5,6). The infection seemed to be spontaneous in origin, because the patient did not have any of these predisposing factor above.

For mild SCJ infections, where the infection is contained within the continues of the joint capsule, initial conservative treatment with intravenous antibiotics seems to be the treatment of choice. However, with any sign of joint swelling, diagnostic and therapeutic aspiration of joint in addition to intravenous antibiotics has been advocated. Furthermore, if there is radiographic evidence of infections beyond the SCJ, enbloc resection is recommended in order to eradicate the infection immediately (5). So SCJ infection can cause life threatening complications. Because if SCJ infection spreads beyond the boundaries of the joint it can invade mediastinal structures and these may cause life threatening complications. But in our patient only drainage and administrated antibiotics was adequate for the control of infection.

In conclusion SCJ infections is a rare clinical entity. Differential diagnosis must be made from malignancies. If an early diagnosis is made only drainage and antibiotics administration can be adequate for the control of the infection.

**REFERENCES**


