J Turgut Ozal Med Cent
DOI: 10.5455/jtomc.2017.05.066 2017;24(4):513-4

Letter to the Editor

Suddenly developed haemorrhagic olecranon bursitis is related to traumatic asymptomatic heterotopic ossification

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Dear Editor,

As olecranon bursitis is a pathology which is often seen in rheumatology practice, the responsible reasons may be, rheumatoid arthritis, crystal arthropaties, pigmented villonodular synovitis, trauma, olecranon spur, avulsion fractures, myeloproliferative diseases. systemic inflammatory diseases and infection(1). Risk factors include drug utilization, diabetes mellitus, azotemia , alcohol, oral anticoagulant drugs and long-term steroid utilization. Clinical findings such as edema, increasing in temperature, pain and pain- related elbow joint disability are identified. Haemorrhagic olecranon bursitis (HOB) is relatively less oftenandgenerally has non-inflammatory features (2-5). There is no enough data in literature about the relationship between calcified reasons like olecranon spur or crystal arthropathies and HOB.

Heterotopic ossification (HO) is a complication which can frequently occur after trauma, especially on elbow area. It often occurs in neurological deficit cases which are due to trauma or spinal cord injuries (5). There is no enough data about bursitis as a secondary complication that occur around tissues with HO. In our case report we aimed to draw attention to HOB which was triggered by silent HO after trauma.

A 75 years old male patient, had right brachial artery injury, amputation of 4th and 5th right hand finger distal phalanges and stabile fractures of radius and olecranon on right elbow due to a motor vehicle crash 2 months before he was hospitalized at our clinic. Patient had no past drug utilization or systemic disease. Brachial artery repair had been performed to the patient and right elbow had been immobilized without any orthopedic interference. The patient had diameter increment on right elbow (about 2 cm on the wrist, and 5 cm on hand level), redness, decrease in pilosity, increase in temperature, allodini, numbness in the hand, decrease in joint mobility of elbow-hand-wrist and right upper extremity shoulder pain when he was admitted to our clinic.

Thyroid, liver and kidney function tests were within normal limits. C-reactive protein 0.46 mg/dl, leucocyte:5200, hemoglobin 13:5 g/dl, sedimentation: 31 mm/hour, skeletal alkalinephosphatase:6.2, calcium oxalate crystal has been detected during urine analysis. In handX-ray , patchy osteopenia and amputations had been detected. In right elbow lateral X-ray , traumatic avulsion of bone with accompanying myositis ossificans and calcified changes is triceps tendon were detected. In right elbow MRI imaging, , calcified triceps tendinitis and myositis ossificans on distal surface of humerus were detected. Hospitalization with reflex sympathetic dystrophy (RSD) diagnosis, for which right upper extremity range of motion (ROM) and strengthening exercises, superficial lymphedema massage, shoulder-hand conventional TENS were performed for 45 minutes. Stellar ganglion block with scopy was done to the patient 3 times a week. After 15 seasons of physical therapy and 3 stellar ganglion blocks, circumference measurements were decreased 3 cm on hand and 2 cm on the midpoint elbow-hand area and complaints were decreased significantly after therapy.

On the 3rd day of physical therapy, swelling, increase of temperature and minimal redness on left elbow has suddenly and spontaneously occurred on olecranon.

Olecranon bursitis diagnosis was suggested according to those findings. In laboratory investigations, RF, anti CCP were normal and uric acid level was was 4.2. 10 cc haemorrhagic synovial liquid was aspirated with

Received: 24.05.2017 **Accepted:** 18.09.2017
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ultrasonographic guide. Synovial fluid culture was negative and there was no any pathological finding of crystal arthropathy or pigmented villonodular synovitis. WBC: 500, RBC: 50000, PLT:16000 were detected in aspiration material and aseptic HOB diagnosis was decided. Traumatic osteochondral bone lesions and soft tissue ossifications (HO) were detected on elbow X-Ray and MRI imaging. On MRI imaging of the left elbow, olecranon bursitis was also detected (Figure 1 a, b).

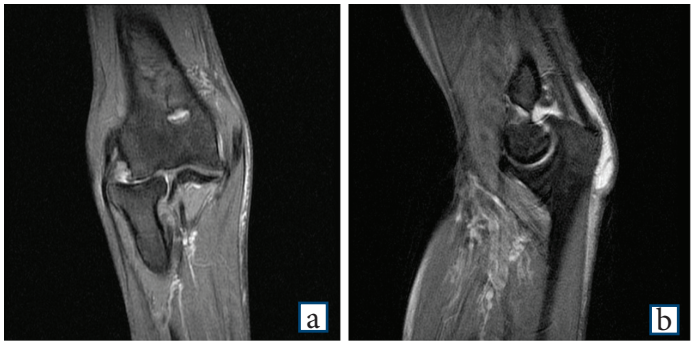

Figure 1a, b. Left Elbow Cor PD FSat MR Left elbow MRI imaging shows olecranon bursitis

Bursitis on the left elbow resolved rapidly after the aspiration of fluid and the swelling was minimal when he was discharged. RSD on the right upper limb and left olecranon bursitis completely resolved at first month visit.

It was considered that HOB was secondary to the missed trauma which was on the other upper extremity. Ossified lesions and bone disarrangement on the radius head at the HOB -side which were detected on radiographs and MRI imaging were interpreted as HO-induced trauma. In the literature, Strickland et al (1) found HOB in a patient with myeloproliferative disorder and drew attention on an association with inflammatory disease in other patients. We did not found any information about the association between the HO and HOB in other literature search. Indeed, pseudogout and olecranon spur relationship with HOB suggests that calcified formations may play a role inits etiology. Our case did not have any systemic disease that can lead to calcified lesions at periarticular soft tissue. Traumatic osteochondral lesions were detected on the head of radius supporting that HO was secondary to trauma. The clinical finding of the patient remained silent until developing acute bursitis. The development of HOB enabled the identification of that pathology-induced trauma. As a result, there was an overlooked trauma and both HO and HOB were triggered by it. The major trauma which resulted in limb loss, led to overlook the effect of trauma on the other side which was affected relatively less. This missed situation draws attention on the necessity of the evaluation of the asymptomatic limb in patients who had major trauma that result in limb loss.

In the RSD treatment, medical therapy, physical therapy, sympathetic ganglion blocks and electro-stimulation techniques were performed. Additional to physiotherapy, stellate ganglion blockage was performed three times to that case. Toshniwal et al (8) found decrease in visual pain score at first week and relief on edema at fourth week of stellate ganglion blockage.

This case draws attention to the relationship of HO and HOB that will contribute to further work to be done in this regard.

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