Intraosseous Ganglion Cyst of Olecranon

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INTRODUCTION

Intraosseous ganglion cysts are one of the differential diagnosis in joints pain. Intraosseous ganglion cysts are benign bony cysts that mainly can be seen in lower extremity, especially around ankle. These cysts have less incidence in upper extremity, mainly around the wrist. They are extremely rare in olecranon. These lesions are often asymptomatic. Patient was a 75-year-old man who had trauma many years ago. When he came to our clinic, he complained of severe pain around his elbow that he could not do ordinary activity. He had local tenderness in elbow and 30 degree limitation in extension. In radiography, lytic, multiloculated lesion existed in region of olecranon. After excisional biopsy was done, cavity was cleaned completely with curette and was filled with autogenous bone. At 10-year follow-up, the patient was completely asymptomatic. Control radiograph showed cavity filled completely by bone; there was no evidence of relapse.

Keywords: Intraosseous ganglion cyst, olecranon, pain

CASE REPORT

Patient was a 75-year-old farmer man who 44 years ago had suddenly pain of left elbow after direct bunt trauma. He could do his activity and did not suffer from extreme pain. So he did not
come to medical centers for 34 years. When he came to our clinic for first time, he had severe pain around his elbow that he could not do ordinary activity.

In examination, he did not have erythema, redness, or inflation around his elbow. Also, his sensory and motor examinations were normal. But, he had local tenderness in region of olecranon and 30 degree limitation in extension. In radiography, lytic, multiloculated 3×2×1.5 cm lesion existed with sclerotic margin expanded from subchondral region of humerus to external cortex of olecranon. It did not have invasion to cortex or soft tissue, periosteal reaction, or expansion [Figures 1, 2]. Single lesion with increase in uptake can be seen in that region, in delay phase of bone scan TC99.

Under general anesthesia, excisional biopsy was done. Bone cavity contained gelatinous translucent material with fibrous formidability. It did not expand to articulation. Inside cavity was cleaned completely with curette and its wall was rasped with dental Barr. After that, cavity was filled with autogenous bone graft [Figure 3]. Patient started movement of his elbow after two weeks of immobilization with Atel.

In pathology, wall's cyst had fibrous tissue without epithelial cell cover that contained amorphous, translucent gelatinous material. So, intraosseous ganglion cyst was diagnosed.

In 6, 12- and 18-month follow up, he did not have any pain in his elbow, even in severe activities. Range of motion had 20 degree limitation in extension. Control radiograph was done; cavity filled completely [Figure 4]. In recent examination that was done 10 years after surgery, bone of olecranon recovered completely; there was no evidence of relapse [Figure 5].
Intraosseous ganglion cyst is benign bony cyst that mainly can involve epiphysis and metaphysis of long bones. Mean average age of patients is 42 years. It is more prevalent in men and in cases located close to neurovascular structures or articular surfaces, they can be causing pain, neurologic dysfunction, or articular fractures, therefore can be symptomatic in just 60% of cases. It can be seen mainly in lower extremity, especially around ankle. This cyst has less incidence in upper extremity, mainly around the wrist. Some scientists believe intramedullary metaplasia due to Intraosseous ganglion cyst. Some others think it makes secondary to degeneration. Also, trauma was mentioned as one of probably etiology of Intraosseous ganglion cyst. In this case, because our patient had history of trauma, probably it was etiology of his cyst. Diameter of lesion is about 1 cm, scarcely can grow up until 5 cm. Rarely can be expansible, destroy cortex, and even due to nerve compression symptoms. Bone scan in this lesion can accompany with decrease or increase in uptake. It can reveal view of fluid-fluid in CT or MRI.

In pathology, intraosseous ganglion cyst has differential diagnose with subchondral cyst secondary to degenerative joint disease. Pathologist can distinguish intraosseous ganglion cyst from subchondral cyst secondary to DJD with epithelial cell layer and connection to joint. In contrast to intraosseous ganglion cyst, subchondral cyst secondary to DJD covers with epithelial cell layer and has connection to joint. Treatment is surgery including Curettage and bone graft, if patient has symptom, or cyst is progressive.

This case report is remarkable, because location of cyst (that is extremely rare in olecranon), diameter of lesion (was huge), and probably role of trauma in occurrence of that. At 10-year follow-up, the patient was completely asymptomatic and reported no pain during his working activities. Physical examination was negative (except 20 degree limitation in extension). Control radiograph showed cavity filled completely by bone; there was no evidence of relapse.

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