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**EDİTÖRE MEKTUP / LETTER TO THE EDITOR**

# Tenosynovial giant cell tumor arising from the posterior cruciate ligament

## Arka çapraz bağdan köken alan tenosinovyal dev hücreli tümör

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Dear Editor,

Tenosynovial giant cell tumor (TSGCT) is a slow-growing, benign tumor which arises from the synovial tissue of the joint. There are two forms of TSGCT -localized and diffuse. The localized type is generally seen as small and multiple masses on palmar surface of hands and feet. Although rare, its larger and solitary form can be seen in large joints such as knee and ankle[1,2]. The ratio of women/men is 2/1, and it is more frequently seen at the ages of 30-50 years[3,4]. Despite the general acceptance in the way it is benign, there also cases, where it had malign character, in literature[5]. Surgical excision is the general treatment approach. But, there is a risk of recurrence[6,7]. We have examined a TSGCT case arising from posterior cruciate ligaments (PCL) and treated with surgical excision. Written informed consent was obtained from patient.

A 56 year-old male patient applied to our polyclinic with the complaints of pain and swelling at the posterior of the left knee. The pain that has lasted for 6 months. The pain was felt while sitting and bending the knee. The swelling at the posterior of the knee has grown gradually for last 3 months. There wasn't any cutaneous sign in inspection, but there was a visible swelling at the back of the knee. There wasn't temperature increase in palpation, but crepitation could be felt. In posterior to femur intercondylar region, there was a 3x3 cm sized, soft, painful and mobile mass. Left knee joint range of motion (ROM) was painful at the end of flexion. There was no extension limitation. Patellar mobility was normal. There were no positive findings in anterior/posterior drawer tests, valgus/varus stress tests, and McMurray test. Laboratory results were within the normal limits.

No pathological finding was determined in radiography. The magnetic resonance imaging (MRI) result was reported as "the mass alongside the posterior of left femur intercondylar region, adjacent to medial PCL and causing lobulation, originating from ACL and PCL, retaining T1 hypo, T2 iso-hyperintense contrast, having size of 3x2x2 cm" (Figure 1-2).



**Figure 1, 2. MR images of mass**

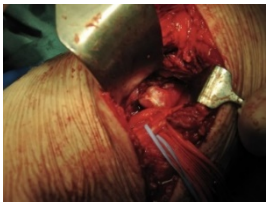

**Figure 3. Image of the mass during the surgery**

**Figure 4. Image of the mass after the surgery**

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Surgery was planned for the patient. During the surgery, the mass was observed to be attached to the PCL (Figure 3). It was thought to be caused from tendon sheath. The mass was peeled off the tendon sheath, removed en bloc, and sent to pathology (Figure 4).

The result was consistent with TSGCT. After the surgery, ROM, quadriceps isometric, and ankle isotonic exercises were administered to the patient. He was mobilized. The patient was discharged from the hospital with an exercise program. Polyclinic control was recommended. Examination of the range of motion at the left knee was normal, and he did not have pain in control examination. Also there was no diameter difference in quadriceps muscle. He was recommended to continue his exercises. Warning for the recurrence, and he was invited for the control examination 6 months later. TSGCT was one of the most frequently seen masses in hand and foot fingers. They constitute 1.7% of all the soft tissue tumors of knee and ankle[8]. In a study on TSGCT cases, it has been observed that 8 of 207 cases were localized to the knee[1].

Most of the cases complain for the non-specific pain and palpable mass, and swelling. In some of the patients, meniscus tear and locking in knee may be seen. Sometimes, the TSGCT may be incidentally detected during arthroscopy or arthrotomies performed for other diagnoses. The skin on the mass can be freely moved. Although rare, depending on the tumor invasion, skin ulcers and adhesions may be seen[1]. Our patient applied with the complaints of pain and gradually enlarging swelling, and had no skin symptom. The duration between the recognition of mass and the surgery is approximately 28 months (4 days–12 years)[1]. This duration was 6 months for the case we presented.

Since many soft tissue lesions may mimic the TSGCT, clinical diagnosis may be difficult. In radiography, no pathology is seen generally. Soft tissue swelling and erosions may be seen rarely. At this point, MRI can provide important information about the character of mass. But the exact diagnosis can be made by pathologic analysis[9]. Synovial sarcoma, desmoid tumor, fibroma, lipoma and other benign soft tissue tumors should be reminded in differential diagnosis. There was no pathological finding was determined in radiography of our patient.

The main treatment of TSGCT is total excision. The recurrence after surgery varies between 9% and 44%. Recurrence is closely related with insufficient excision[10]. In 6$^{th}$ month control examination of our case, there was no evidence to suggest recurrence.

In conclusion, TSGCT, which is frequently seen in palmar surface of hand and foot fingers, may be rarely seen in knee joint, and its treatment is surgical. Through a careful surgery ensuring the exact and total excision and a close follow-up after the surgery, the recurrence rates reported in literature can be decreased.

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