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- 중례 보고 -**

**Localized Nodular Synovitis of the Knee Presenting
as Anterior Knee Pain – A Case Report –**

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INTRODUCTION

Management of anterior knee pain is a challenge to clinicians because of its indefinite characterization. The common etiological factors include abnormal alignment of extensor mechanism, direct trauma, and overuse syndrome. We present an unusual case of a localized nodular synovitis (LNS) causing anterior knee pain.

CASE REPORT

A 35-year-old man complained of anterior knee pain for 3 months, which occurred insidiously without any antecedent trauma. He experienced no mechanical symptom such as catching, locking, or giving way. The pain was characterized as dull without distinct localization. Physical examination revealed full range of motion and there were no swelling, localized tenderness, palpable mass, quadriceps atrophy, or instability. Ordinary radiographs demonstrated no abnormal mineralized density. The MRI showed a low-signal density mass at the infrapatellar fat pad in front of intercondylar notch.

Arthroscopic examination and excisional biopsy were performed, and the mass was removed en bloc covered with fat pad and synovium. The mass had a well-formed pseudocapsule without villous fronds. The diameter is about 6 mm. The cut surface is reddish brown with yellowish septum.

He recovered without any perioperative problems, and had no difficulty in daily living. At postoperative 1 year, there was no evidence of recurrence.

DISCUSSION

Anterior knee pain is a common clinical complaint, but tumors around knee are rare, which makes clinical suspicion unlikely and often leads to neglect.

Three forms benign synovial proliferative lesions have been identified: an isolated discrete lesion involving tendon sheath (giant cell tumor of tendon sheath; GCT of TS); a solitary intra-articular nodule (localized nodular synovitis; LNS); and a diffuse, often villous, and pigmented process involving the synovial tissue (pigmented villonodular synovitis; PVNS).

The LNS shares common histologic features with PVNS, but it is important to make a distinction between the two entities because their clinical presentation differ greatly, as do their responses to treatment. The multinucleated giant cells are interspersed in the background of polygonal ovoid mononuclear cells. Patches of hyalinized tissue, collagen fibers, and xanthomatous foci composed of lipid-laden macrophage, or foam cell are seen with rare or absent cellular atypia, or mitotic figures. The most characteristic features of PVNS, not found in LNS are the presence of diffuse frond-like projections of synovium and an abundance of hemosiderin deposition.

The localized nodular synovitis (LNS) is a benign proliferative synovial tumor manifesting as an intra-articular solitary nodule. Clinicians should include this tumorous entity in differential diagnosis of the cause of anterior knee pain.

Key Words: Localized nodular synovitis, Infrapatellar fat pad, Anterior knee pain