Localized Pigmented Villonodular Synovitis of Knee: A Mimicker

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BRIEF DESCRIPTION

Pigmented villonodular synovitis is a benign neoplastic condition arising from the synovium. The synovium is pigmented (loaded with increased mitochondria siderosomes), metaplastic, pedicled or non-pedicled, and hypertrophied. It commonly arises from meniscocapsular junction. It presents as a localized or diffuse variety.¹ Localized variety presents with locking, effusion, pain, reduced range of motion, palpable mass, or pain over the joint line which mimics different pathological conditions.²,³

We present a case of localized pigmented villonodular synovitis which led to diagnostic dilemma and mimicked common pathological conditions. Very few case reports are reported in which the lesion is only diagnosed with arthroscopy when other imaging and clinical findings are misleading.⁴,⁵

A 33-year-old male presented with left knee pain and swelling following minor trauma 1-month back. On examination, tenderness was localized to the lateral side of the joint and over the antro-lateral aspect with a palpable swelling. Clinically suspected as lateral meniscal tear or synovial hemangioma. X-ray revealed a lateral tibial condyle erosion with increased soft tissue density in the lateral aspect (Figure 1). Magnetic resonance imaging reported as synovial enhancement with T1 isointense and T2 hypointense suggesting synovial loose body or a osteochondral fragment (Figure 2). The patient underwent arthroscopy and the joint appeared normal with no pathology of menisci and cruciates. Medial plica was thickened with Grade-2 cartilage changes in the lateral femoral condyle which added further to the dilemma. On probing, the lateral meniscus with pressure over the tender spot revealed a pigmented sessile mass extending from the lateral meniscocapsular junction (Figure 3). The mass was excised with a mini-open procedure to remove the extra-articular mass arising from the meniscocapsular junction.

Figure 1: Radiograph of knee anterior-posterior (a) and lateral (b) view showing increased soft tissue shadow in the lateral joint space with lateral condyle erosion

Figure 2: Magnetic resonance imaging (1.5 tesla) coronal (a), sagittal (b) and axial (c) view showing mild joint effusion with synovitis. Soft tissue iso-enhancement near lateral meniscus region. Bony defect with hyperintensity and enhancement in lateral margin of lateral tibial condyle
The mass sent for histopathological examination and reported as pigmented villonodular synovitis (Figure 4). At present 5 years follow-up, the patient is having full range of motion of knee with no evidence of recurrence.

**Points to Ponder**

1. Awareness of localized pigmented villonodular synovitis as a differential diagnosis in a patient presenting with joint line tenderness and swelling in knee
2. Knee arthroscopy and biopsy are considered the gold standard
3. Maximum clearance of mass should be done to prevent recurrence
4. Regular follow-up is mandatory.

**REFERENCES**