

## Bilateral Knee Pigmented Villonodular Synovitis: An Uncommon Case Report

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**Abstract:** Pigmented villonodular synovitis (PVNS) is a joint disease characterized by inflammation and overgrowth of the joint lining, usually affecting the hip or knee. It can also occur in the shoulder, ankle, elbow, hand or foot. A 45 year old female presented with bilateral swelling in both popliteal fossa. USG knee was suggestive of organized popliteal cyst??Hematoma. MRI left knee was suggestive of PVNS with evidence of calcification. MRI right knee showed diffuse thickening in synovium. FNAC was suggestive of Giant cell tumor of tendon sheath. A diagnosis of pigmented villonodular synovitis was made based on imaging findings and FNAC and was further confirmed by histopathological examination. PVNS is usually monoarticular. The case is presented because of unusual involvement of bilateral knee joints.

**Keywords:** Knee joint, Pigmented villonodular synovitis, Synovium

### INTRODUCTION

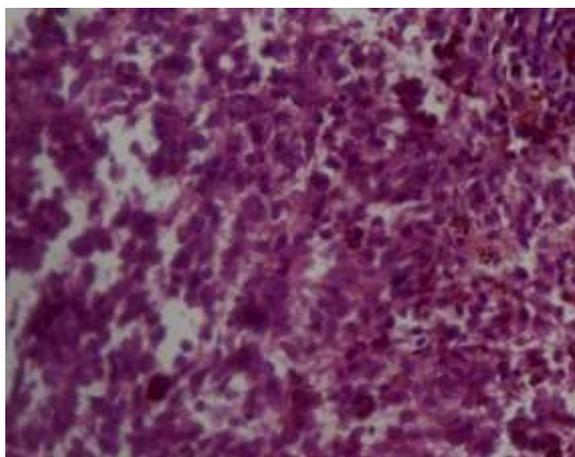
Pigmented villonodular synovitis (PVNS) is an uncommon disease that affects the internal lining membrane of the body's moving joints. PVNS most commonly affects large joints, with knee being the most frequent site. Generally it is either localized or widespread, both of which are characterized by overgrowth of the joint's lining tissue (synovium). The cause of PVNS is unknown. It is generally more common in men than women [1].

### CASE REPORT

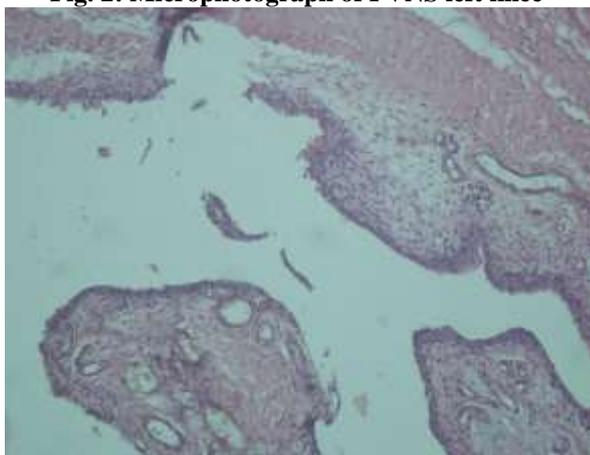
A 45 year old female presented with swelling in bilateral popliteal fossa and was associated with difficulty in squatting and pain. Swelling was gradually increasing in size. USG knee was suggestive of organized popliteal cyst?? hematoma. MRI left knee was suggestive of PVNS with evidence of calcification. MRI right knee showed diffuse thickening in synovium. FNAC was suggestive of Giant cell tumor of tendon sheath. A diagnosis of pigmented villonodular synovitis was made based on imaging findings and FNAC and was further confirmed by histopathological examination.



Fig. 1: Gross photograph of specimen



**Fig. 2: Microphotograph of PVNS left knee**



**Fig. 3: Microphotograph of PVNS Right knee**

### DISCUSSION

PVNS is a benign proliferative disorder of the synovium of unknown etiology [2]. It was first reported in 1941 that can affect bursae, tendon sheaths and joints [3, 4]. It typically occurs in adults in their third or fourth decade of life, with a male-to-female ratio of 1.9 to 1.3, usually with monoarticular involvement. The most frequently affected site is the knee joint, followed by the fingers, feet, ankles, hips, wrists and shoulders in a decreasing order of frequency [5, 6]. Histologically it has multinucleated giant cells with characteristic pigmentation due to intra and extra cellular hemosiderin perhaps due to its tendency to bleed [1].

### CONCLUSION

PVNS is usually monoarticular. The case is presented because of unusual involvement of bilateral knee joints.

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