



## Letter to Editor

**“PICK up”: PVNS issues for clinician’s knowledge update****Sharat Agarwal<sup>1,\*</sup>, Manika Agarwal<sup>2</sup>**<sup>1</sup>Dept. of Orthopaedics, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India<sup>2</sup>Dept. of Obstetrics and Gynaecology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India

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Sir,

At the outset, I would like to congratulate the authors of the article published in your journal in the current issue entitled- “Localized pigmented villonodular synovitis of talocalcaneal joint: A rare case report. Indian Journal of Orthopaedics Surgery 2019;5(4): 275–277”. However, certain concerns are required to be addressed for the benefit of the readers of this article.

It is important to bring into the notice that the World Health Organization (WHO) classified these tumors in the category of tenosynovial giant cell tumors in 2013. Classification defines two distinct types of giant cell tumor: giant cell tumor of the tendon sheath (GCTTS) and pigmented villonodular synovitis (PVNS). GCTTS is a localized form that can occur within the joint (intraarticular, formerly localized PVNS), or outside of the joint (extraarticular, formerly nodular tenosynovitis). Pigmented villonodular synovitis is also called diffuse-type PVNS or diffuse-type giant cell tumor.

Based on this terminology, it may be aptly called as “GCTTS” now instead of localized pigmented villonodular synovitis of talocalcaneal joint.<sup>1</sup> Plain film findings are soft tissue swelling, increased density of the synovium due to hemosiderin deposition, multiple subchondral cysts, cortical

pressure erosions & cartilage space narrowing. Author has not addressed the characteristic radiological findings, which otherwise would have been expected in this case with such a long duration of presentation. The differential diagnoses of articular PVNS include uncalcified synovial chondromatosis, tuberculous arthritis, and hemophilic arthropathy.<sup>2</sup> Rheumatoid arthritis, synovial hemangioma, synovial chondromatosis, gout, and amyloid arthropathy may all present similarly on MRI. MRI findings are not pathognomonic of PVNS. However, it may reveal areas of decreased signal within the hyperplastic synovium reflecting the deposition of hemosiderin.

History of trauma should be taken as it precedes the development of PVNS like in this case, where skin and soft tissue ulceration was present. So also, regional lymphadenopathy to rule out infective or neoplastic aetiology. An investigation work up was expected in the article which includes Erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), Total and differential leucocyte count (TLC/DLC), Serum uric acid, Serum Rheumatoid factor (RF), Anti Cyclic citrillunated peptide (Anti CCP), Mantoux test, Synovial fluid analysis after joint aspiration including crystals, gram staining/culture for pyogenic organisms and polymerase chain reaction (PCR) for tuberculosis should be undertaken to rule out various differential diagnoses. Literature reports that

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involvement of the hip, ankle, shoulder, and elbow follow in descending frequency, where it has been found to be diffuse in nature.<sup>3</sup> The localized intra-articular form of PVNS occurs almost exclusively within the knee and occurrence at ankle, if other conditions are ruled out is certainly uncommon. Recurrence is up to 40%, which is why biological adjuvant therapies and radiotherapy are described. Radiosynoviorrhesis is recommended as a post-operative treatment to increase the probability of a total removal of persisting PVNS cells. Originally, external beam radiation was used in recent years, but a newer method called intraarticular radiation, or isotopic synoviorrhesis, has been successfully used. The synoviorrhesis-surgery sequence is more effective in joints other than the knee, where recurrence is as high as 30% and so in this particular case requires due consideration. Intraarticular radiation therapy alone (radiation therapy as a primary treatment) has also been attempted.<sup>4</sup> It is worthwhile to mention for the benefit of the readers that recent reports show convincing results with the use of multiple systemic therapies, including monoclonal antibodies and tyrosine kinase inhibitors. Most recently, the use of pexidartinib, a colony-stimulating factor 1 CSF-1 receptor antagonist, was approved by the FDA as systemic therapy in August 2019 for use in patients with extensive and recurrent disease who are not likely to benefit from surgical intervention.<sup>5</sup>

## 1. Conflict of Interest

None.

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