

Evidence Discussion (MS 15.2)

Pigmented villonodular synovitis (PVNS) is a benign, hypertrophic synovial process characterized by villous, nodular, and villonodular proliferation and pigmentation from hemosiderin. Hemosiderin deposition is more prominent with diffuse disease. Radiographs are non-specific and may appear normal 20% of the time but joint effusion, soft-tissue swelling, extrinsic erosion of bone, absence of calcification, preservation of joint space, and/or normal bone mineralization may be seen in diffuse intraarticular PVNS. Localized form may appear normal on plain radiographs. CT shows nonspecific synovial thickening and optimally demonstrates bone erosion but the extent of lesions are not well depicted with this modality, whereas MR can demonstrate extent of disease. MR is used after plain radiography because monoarticular arthropathy can be nonspecific but there can be pathognomonic low signal intensity lesions seen on T2-weighted. MR is optimal for demonstrating the relationship of extraarticular lesions to the tendon sheath to suggest the diagnosis.

References

1. Murphey MD, Rhee JH, Lewis RB, et al. Pigmented villonodular synovitis: radiologic-pathologic correlation. *Radiographics*. 2008;28:1493-1518. doi:10.1148/rg.285085134