Localized Nodular Synovitis of the Knee: MR Imaging Appearance and Clinical Correlates in 21 Patients

陳榮邦

Huang GS;Lee CH;Chan WP;Chen CY;Yu YS;Resnick D

摘要

Abstract

OBJECTIVE: Localized nodular synovitis of the knee and pigmented villonodular synovitis are similar histologically. The purpose of this study was to evaluate the MR imaging appearance and clinical findings of localized nodular synovitis of the knee and to differentiate this condition from pigmented villonodular synovitis. MATERIALS AND METHODS: A retrospective review of MR imaging of the knee was performed in 21 patients with histologically confirmed localized nodular synovitis. Surgical excision of the lesion was performed in all patients. The MR imaging appearances of the lesions were defined, and the clinical and surgical findings were reviewed. RESULTS: All lesions presented as a solitary intraarticular mass. The mass originated from the synovial lining in different locations including the infrapatellar fat pad (n = 14), suprapatellar pouch (n = 5), and posterior aspect of the intercondylar notch (n = 2). A small (2.0-3.5 cm; mean diameter, 2.7 cm) ovoid mass (n = 13) was more common than a large (5.0-9.0 cm; mean diameter, 6.5 cm) polylobulated mass (n = 8). At surgery, a long pedicle attached the mass to the adjacent synovium in two patients, but this was observed on MR imaging in only one patient. The lesions showed intermediate (n = 15) or hyperintense (n = 6) signal intensity on T1-weighted images and heterogeneously high (n = 13) or low (n = 8) signal intensity with variable circular foci of low signal intensity on T2-weighted images. On T2-weighted images, linear regions of high signal intensity within the mass were seen in seven lesions. Prominent enhancement of the lesion with IV contrast administration was shown in all patients who were given contrast material (n = 10). Knee pain, joint swelling, and a palpable mass were the most frequent clinical manifestations. An acutely painful knee was noted in one patient who presented with torsion of an infrapatellar pedicle. Five patients complained of locking of the knee, but at physical examination, restricted terminal knee extension was noted in nine patients. CONCLUSION: Localized nodular synovitis of the knee predominantly involves the infrapatellar fat pad. It may produce symptoms related to mechanical derangement of the knee. Although there is no typical MR appearance for this

lesion, many features help to differentiate it from pigmented villonodular synovitis.