Localized pigmented villonodular synovitis in a child knee

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ABSTRACT
Pigmented villonodular synovitis is a benign proliferative tumor of the synovium. It is very rare, and most cases occur in the knee joint. In this article, we report a case of localized pigmented villonodular synovitis in the knee joint of a 14-year-old boy. This condition is rare in the knees of the children. We preferred to remove the tumor with arthrotomy instead of arthroscopy for two reasons: (i) the patient was obese, (ii) we thought that recurrence risk was high after arthroscopy.

Keywords: Child; knee joint; localized pigmented villonodular synovitis.

CASE REPORT
A 14-year-old boy presented with recently recognized intermittent left knee swelling. Physical examination revealed that swelling was a solid mass with a diameter of 3 cm (Figure 1). It was apparent in knee extension, and was disappearing during knee flexion. The swelling was painless. The range of motion was within normal limits. A written informed consent was obtained from the patient.

There was no abnormality in knee radiograms. Magnetic resonance imaging showed a soft-tissue tumor in the infrapatellar fat pad (Figure 2).

Arthrotomy of the left knee was performed with a tourniquet under general anesthesia. The findings were normal during arthrotomy. The articular cartilage of patella and femoral condyle was normal; there was no damage. Reddish-brown tumor (30x30x15 mm in size) was located in the infrapatellar fat pad (Figure 3, 4).

The patient was allowed to walk with full weight bearing on postoperative first day. He was completely asymptomatic with full range of motion of the knee, no effusion or tenderness and no palpable mass one week after.
DISCUSSION

There are case reports of LPVS with various symptoms of the knee.\textsuperscript{[6-8]} The only complaint of our patient was intermittent swelling on the lateral side of the left knee. He was pain free. However, PVS may invade the subchondral bone, producing cysts and erosions. For this reason, we recommend to remove the tumor as early as possible to avoid secondary degenerative lesions.

Magnetic resonance imaging is a valuable diagnostic tool with high sensitivity and specificity, especially when radiograms are negative.\textsuperscript{[9,10]} It may show the hemosiderin deposits within the joint.

We preferred removal of tumor with arthrotomy instead of arthroscopy for two reasons: (i) the patient was obese, (ii) a recurrence rate of 18% was reported.
in a study in two of 11 cases within 6-9 months after arthroscopic surgery.[11]

In conclusion, we think that if the lesion is removed accurately, the recurrence rate may be low in LPVS.

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