Osteonecrosis of the femoral condyle is known as an uncommon complication after arthroscopic meniscectomy. The lesion of osteonecrosis can be irreversible, thus early detection of the disease is crucial for treatment. A 50-year-old male patient without known risk factors of osteonecrosis developed increasing knee pain after arthroscopic partial meniscectomy. Magnetic resonance imaging showed rapid progression of osteonecrosis of the medial femoral condyle. Unicompartmental knee arthroplasty was performed after 9 months of conservative therapy. The patient is now free from pain during daily activities. It might be important to remind that if the patient’s pain after arthroscopic partial meniscectomy is severe than expected, clinical doctors should pay attention to the possibility of ongoing osteonecrosis of the femoral condyle.

Keywords: Knee, Arthroscopy, Meniscectomy, Osteonecrosis

Case Report

A 50-year-old male visited our clinic with a major complaint of pain in the right knee that had started five days earlier. He had no history of trauma and complained of a pulling sensation behind the right knee and giving way symptoms when walking down stairs. The patient had been working as a medical technician carrying gurneys for 21 years and had no significant medical history or history of trauma, alcohol abuse, and intra-articular steroid injections. Physical examination revealed tenderness over the medial femoral condyle but no edema. The range of motion and lower limb alignment were normal. McMurray’s test was negative, joint instability was not present, and early radiography was normal (Fig. 1). Magnetic resonance imaging (MRI) showed
evidence of posterior meniscal tear without any chondral or bone marrow damage (Fig. 1). Surgical treatment of the posterior tear of the medial meniscus was performed. A complex tear of the posterior horn of the medial meniscus and an International Cartilage Repair Society grade II cartilage lesion (lesions involving <50% of the total cartilage thickness) in the medial femoral condyle were observed with arthroscopy (Fig. 2). Surgery was performed under spinal anesthesia while maintaining 70 mmHg of pressure with an arthroscopy pump, and a tourniquet was not used. Partial meniscectomy was performed with a basket forceps and a shaver without using a razor or radiofrequency device and the cartilage damage was treated with debridement. The total surgical time was approximately 20 minutes.

The patient complained of pain at the second postoperative week, which was managed with medication. At the sixth postoperative week, the patient felt severer pain and had the greatest difficulty in walking with straight legs, for which an increased dose of anti-inflammatory analgesics was administered. At the 12th postoperative week, an MRI scan was performed because the pain increased except for temporary relief.

Fig. 1. Preoperative X-ray, magnetic resonance imaging (MRI). (A−C) There was no evidence of osteonecrosis on preoperative radiologic evaluation. (B, C) MRI shows tear of posterior horn of medial meniscus.

Fig. 2. Intraoperative arthroscopic images. (A, B) A complex tear of posterior horn of the medial meniscus. (C) An International Cartilage Repair Society Grade II cartilage lesion on the medial femoral condyle. (D) Partial meniscectomy was done on the medial meniscus.

Fig. 3. Radiologic evaluation 3 months after operation. (A) Simple X-ray shows a radiolucent lesion on the medial femoral condyle. (B, C) Coronal & sagittal modified turbo spin echo images show internal cartilage delamination of the medial femoral condyle.