Chondrolysis After Hip Arthroscopy



Jesús Más Martínez, M.D., Javier Sanz Reig, M.D., Manuel Morales Santias, M.D., and David Bustamante Suarez de Puga, M.D.

Abstract: We report the case of a 58-year-old woman who presented with left hip pain and was diagnosed with femoroacetabular impingement. She underwent hip arthroscopy to repair a degenerative labral tear, as well as radiofrequency debridement and microfracture of the exposed chondral defect, and femoral osteoplasty. Two months after hip arthroscopy, hip pain and limping began. Hip radiography showed a concentric decrease of joint space and no signs of joint incongruity or osteophytosis. Revision surgery 4 months after hip arthroscopy showed that the cartilage of the femoral head was soft and separated from the subchondral bone.

ost hip arthroscopy complications have been recognized as minor and are related to traction and portal placement. There are rare but major catastrophic complications reported in the literature, such as hip dislocation, intra-abdominal and intrathoracic fluid extravasation, hypothermia, infection, thromboembolic phenomena, avascular necrosis, heterotopic ossification, femoral neck fracture, and death.¹⁻³ We discuss the factors reported in the literature as potential contributors to the loss of articular cartilage.

We report a case of chondrolysis of the hip in a 58-yearold woman after hip arthroscopy for femoroacetabular impingement. We discuss the factors predisposing chondrolysis occurrence. We believe the cause of chondrolysis in our patient may have been secondary to electrocautery or to an injury that occurred during the arthroscopic procedure. The patient agreed that the details of this case could be submitted for publication.

Case Report

A 58-year-old woman came to us with left hip pain of 6 months' duration. She had been taking oral analgesics with no improvement. Four years before, she had undergone operation for a hip resurfacing prosthesis on the right hip, with successful clinical and radiologic

From Hip Unit, Department of Orthopaedic Surgery, Clínica Vistahermosa, Alicante, Spain.

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Address correspondence to Jesús Más Martínez, M.D., Clínica Vistahermosa, Av de Dénia, 103, 03015 Alicante, Spain. E-mail: jmas@traumavist.com

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results, as can be seen in Figure 1. Her pain was located in the groin and was aggravated by squatting, crossing her legs, and sitting for long periods. On clinical examination, the range of hip motion was flexion, 100°; internal rotation, 0°; external rotation, 20°; abduction, 30°; and adduction, 30°. The impingement test result was positive. Initial plain radiographs showed loss of femoral head-neck offset and asphericity. The joint space was well maintained and there was no evidence of hip dysplasia (Fig 1A and B). Magnetic resonance imaging did not reveal avascular necrosis, a labrum tear, or evident chondral damage (Fig 1C and D). The patient was diagnosed with left hip femoroacetabular impingement, cam type, and was offered hip arthroscopy with decompression of the femoroacetabular impingement lesion. The Harris modified hip score preoperatively was 69.3 points.

The procedure was performed using spinal anesthesia with the patient in the supine position on a fracture table for hip distraction. A large padded perineal post was used. Distraction was performed under fluoroscopic guidance. The hip joint was not aspirated or injected before distraction. We used a pressure- and flowcontrolled pump. The anterolateral and midanterior portals were set up under fluoroscopic and arthroscopic observation.⁴ A degenerative labral tear was identified in zones 2 and 3.5 It was repaired to the rim of the acetabulum using 2 suture anchors (PushLock, 2.9 mm; Arthrex, Naples, FL). An exposed bone chondral defect was also identified in the anterosuperior region of the acetabulum (Fig 2). It was debrided with radiofrequency ablation, and microfractures were performed. Traction was then released and the hip was flexed. A 5.5-mm bur was used to resect the cam lesion under fluoroscopic guidance and arthroscopic visualization. The capsule

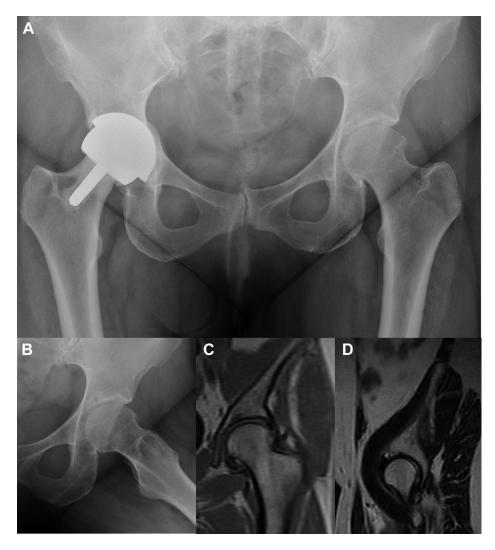


Fig 1. Preoperative images. A 58-yearold woman with left hip pain of 6 months' duration. The impingement test result was positive, and her pain was located in the left groin. The joint space was well maintained and loss of femoral head-neck offset and asphericity (cam lesion) in the left hip are shown in the (A) anteroposterior pelvic and (B) axial hip views. Right hip resurfacing arthroplasty was performed, with a 4-year follow-up. No evidence of osteonecrosis of the left femoral head is seen in (C) coronal T1-weighted magnetic resonance images and (D) sagittal T2 magnetic resonance images.

was not repaired. At no point during this procedure was there any abnormal bleeding. The portals were closed and a sterile dressing was applied. Platelet-rich plasma was infused. Intra-articular fluid pressure during the procedure remained between 40 and 65 mm Hg. The total operation time was 85 minutes, and the traction time was 45 minutes.

The patient was discharged on the following day. She walked with walking aids over 4 weeks. One month after surgery she reported no pain and squatted and crossed her legs with no difficulty. However, 2 months after surgery, the patient began to experience groin pain, restriction of hip motion, and mild limping. She denied previous trauma. Conservative treatment with oral analgesics and non—weight bearing was prescribed, but the pain and limping increased. Laboratory test results showed a normal erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) levels. Hip radiographs showed a concentric decrease of joint space and no signs of joint incongruity or osteophytosis (Fig 3). The Harris modified hip score was 39.6 points. We

recommended repeating magnetic resonance imaging, but the patient refused because it was not covered by her medical insurance. Because of the patient's severe limitations, a diagnostic/therapeutic surgical procedure was prescribed.

At surgery 4 months after hip arthroscopy, the cartilage of the femoral head was soft and separated from the subchondral bone (Fig 4). The exposed bone chondral defect in the anterosuperior region of the acetabulum was not covered by fibrous tissue. There were no signs of surgical infection. Macroscopic examination of the femoral head did not show evidence of osteonecrosis or subchondral collapse. Rim acetabular anchors had not damaged either the acetabulum or the femoral head cartilage. Because of the global fullthickness lesion of the articular femoral head cartilage, it was decided to proceed with hip resurfacing arthroplasty, following which the patient became pain free. Intraoperative culture results were negative. At 2-year follow-up, she was asymptomatic and the Harris hip score was 96 points (Fig 5).

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