



Introduction

Hip Arthroscopy: The Next Evolution in Sports Medicine

Reports on arthroscopic treatment of hip disorders have been published as early as the 1970s.¹ However, hip arthroscopy has been poorly established in most centers, and only a relatively few number of orthopedic surgeons across the United States perform hip arthroscopy on a regular basis. Over the last 3 decades, sophisticated arthroscopic techniques for the treatment of knee injuries have been developed and rapidly established in sports medicine. Nowadays, arthroscopic treatment represents the standard approach to many types of knee lesions. This advance in knee surgery was followed by a similar development in shoulder surgery, and various shoulder lesions are commonly treated arthroscopically these days. This relatively rapid development of arthroscopic techniques around the knee and shoulder is in contrast to the relatively slow development of hip arthroscopy.

Within the discipline of sports medicine, hip arthroscopy has received considerably less attention than knee or shoulder arthroscopy. This phenomenon may be explained by a number of reasons. The anatomy of the hip joint and its surrounding structures makes the arthroscopic procedure challenging. The hip joint is surrounded by a thick muscular envelope, which makes the surgical approach more difficult. The femoral head is deeply recessed in the bony acetabulum and is convex in shape, which makes the surgical procedure more challenging and has slowed the development of surgical instruments. Moreover, the relative proximity of the sciatic nerve, lateral femoral cutaneous nerve, and remaining femoral neurovascular structures increases the risk of neurovascular complications.

Over the past few years, hip arthroscopy has been gaining considerable interest across the United States. At our center, we have had the chance to learn about hip arthroscopy over the last 4 years. Significant advances have improved and facilitated arthroscopic hip surgery. Anatomic landmarks have been defined to optimize the portal positions; patient position and the setup of the operating room have been refined and standardized.²⁻⁶ Improved diagnostic tools, such as magnetic resonance imaging, have helped to establish the diagnoses and the indications for surgery. New surgical instruments specifically designed for hip arthroscopy have been developed to facilitate the procedure. Most notably, the development of flexible instruments

has led to improved accessibility and visualization of the hip joint during arthroscopic procedures. Today, various hip lesions including labral tears, capsular laxity, chondral lesions, ligamentum teres injuries, snapping hip syndrome, and loose bodies can successfully be treated arthroscopically.⁷ Less common indications for hip arthroscopy include management of osteonecrosis of the femoral head, crystalline hip arthropathy (gout and pseudogout), infection, management of posttraumatic intra-articular debris, and management of mild osteoarthritis.⁷ It has been shown that arthroscopic hip surgery is a safe technique and is associated with a low complication rate.⁸

Arthroscopic hip surgery remains a challenging and exciting field. Recent improvements of the surgical techniques, advanced imaging modalities, and the establishment of specifically designed instrumentation have helped to overcome many challenges and increased the indications for hip arthroscopy. It is anticipated that in the near future further improvements and experience will help to establish arthroscopic hip surgery as a standard procedure performed by many more orthopedic surgeons.

References

1. Gross R: Arthroscopy in hip disorders in children. *Orthop Rev* 6:43-49, 1977
2. Byrd JW: Hip arthroscopy in the supine position. *Oper Tech Sports Med* 10:184-195, 2002
3. Byrd JW: Hip arthroscopy. The supine position. *Clin Sports Med* 20:703-731, 2001
4. Byrd JW: Avoiding the labrum in hip arthroscopy. *Arthroscopy* 16:770-773, 2000
5. Glick JM: Hip arthroscopy. The lateral approach. *Clin Sports Med* 20:733-747, 2001
6. Philippon MJ: Debridement of acetabular labral tears with associated thermal capsulorrhaphy. *Oper Tech Sports Med* 10:215-218, 2002
7. Kelly BT, Williams RJ 3rd, Philippon MJ: Hip arthroscopy: current indications, treatment options, and management issues. *Am J Sports Med* 31:1020-1037, 2003
8. Sampson TG: Complications of hip arthroscopy. *Clin Sports Med* 20:831-835, 2001

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