Hip Arthroscopy
Common Problems and Solutions

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KEYWORDS

• Hip arthroscopy • Femoroacetabular impingement • Labral tear • Femoroplasty • Capsule

KEY POINTS

- Patient selection is fundamental to ensuring good clinical outcomes after hip arthroscopy.
- Understanding the anatomy around the hip joint, in particular the anatomy of the lateral femoral cutaneous nerve and femoral neurovascular bundle, helps to reduce iatrogenic nerve injury.
- Traction-related complications are unique to hip arthroscopy and careful application and use of traction helps to mitigate potential problems.
- The most common reason for failure of hip arthroscopy for femoroacetabular impingement is inadequate correction of the deformity.
- Recovery after hip arthroscopy is highly variable and a systematic rehabilitation protocol is essential to optimize outcomes.

INTRODUCTION

Hip arthroscopy is becoming more common for an expanding array of indications as surgeons become more comfortable with techniques and instrumentation improves. A recent study showed a 250% increase in hip arthroscopic procedures between 2007 and 2011.[1] The increasing use of this procedure has revealed complications and reasons for poor outcomes. Ultimately, a successful outcome depends on establishing a systematic algorithm for evaluation and treatment of patients and meticulously and efficiently executing the surgical plan. Understanding and avoiding potential pitfalls and complications becomes paramount to optimize clinical outcomes and for the safety of the patient. This article outlines factors that contribute to less-than-favorable outcomes and summarizes potential complications associated with hip arthroscopy.

PREOPERATIVE FACTORS

Successful hip arthroscopy starts in the clinic, and choosing the correct patient as well as the correct surgery are the most important factors affecting surgical outcome.

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Ensuring the correct diagnosis is fundamental to planning a successful surgery. It is also important to identify those who are at high risk for failed surgery or complications.

Asymptomatic Radiographic Findings

When working up a patient for hip pain, it is important to keep in mind that there are many pain generators around the hip, and that a broad differential diagnosis should be taken into account. This is especially true if a patient is referred in from an outside provider with radiographic imaging consistent with femoroacetabular impingement (FAI). Radiographic findings of FAI morphology among asymptomatic adults and adolescents are common, with one study showing cam morphology in as many as 14% of asymptomatic volunteers.[2–4] In the preoperative evaluation and work-up, the surgeon should not focus solely on the radiographic findings, because they may not be the source of pain. There can be other disorders as pain generators, and not necessarily the FAI that was identified radiographically. The common asymptomatic radiographic FAI could lead to an operation that not only fails to address the cause of pain but also places the patient at risk for intraoperative and postoperative complications with no clinical benefit. It is critical for surgeons to have a systematic algorithm to ensure that the correct diagnosis is made and the offending disorder is addressed.

Hip Dysplasia

Underlying structural abnormalities that may diminish the efficacy of arthroscopic treatment should be recognized before proceeding with surgery. The most common condition that might contribute to the disorder, as well as being problematic in treating the patient, is developmental dysplasia of the hip (DDH) (**Fig. 1**). In patients with DDH, the labrum may undergo compensatory hypertrophy to increase the relative volume of the hip. This hypertrophy, in combination with the abnormal contact forces in the dysplastic hip, can cause the labrum to degenerate, develop cystic changes, and tear.[5–7] Although hip arthroscopy might be able to address the resultant labral disorder, it is merely indicative of an underlying problem. The underlying structural disorder in DDH cannot be addressed arthroscopically and could potentially be exacerbated by violation of the soft tissue structures around the hip.

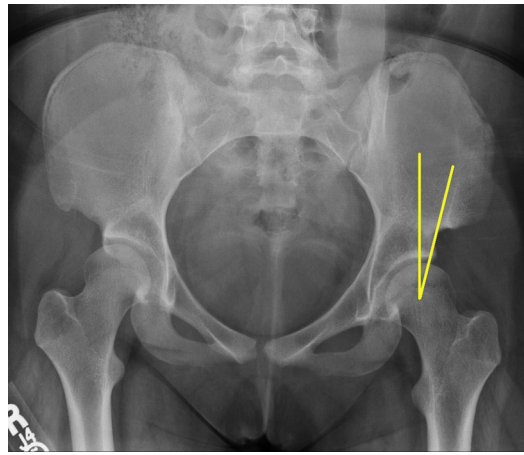

Fig. 1. Lateral center edge angle of less than 20° indicates dysplasia. Hip arthroscopy in the setting of dysplasia is associated with inferior outcomes and increased risk of complications.