
Femoroacetabular Impingement

I. Pathoanatomy, Clinical Evaluation, and Arthroscopic Treatment Strategies

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Femoroacetabular impingement (FAI) has become increasingly recognized as a disorder that can lead to progressive labral and chondral injury and early hip degeneration. Dynamic impingement caused by structural hip pathomorphology can limit hip range of motion (ROM) and result in repetitive impact of the proximal femoral head and neck against the acetabular rim, resulting in damage to the labrum and adjacent acetabular articular cartilage. The two primary structural abnormalities responsible for intra-articular impingement occur on either the femoral side (cam impingement; Figure 2-1) or the acetabular side (rim impingement; Figure 2-2) of the hip joint. With internal rotation and flexion or with straight flexion, the labrum and adjacent soft tissues are compromised, ultimately resulting in irreversible damage to the articular cartilage and early-onset joint degeneration.¹ Over the past decade, additional patterns and sources of both intra- and extra-articular impingement have led to a more comprehensive diagnostic and treatment algorithm. Recognition of these structural abnormalities through appropriate history, physical examination, and imaging is essential for early diagnosis and surgical correction before the progression of irreversible articular cartilage damage. Furthermore, recognition of FAI as a cause of labral pathology and articular cartilage degeneration has led to new treatment strategies for young adults with hip pain.

The etiology of cam and rim impingement morphology in humans remains controversial and incompletely defined. An evolutionary explanation has been proposed.² Hogervorst et al described 2 unique aspects of human evolution that have affected hip and pelvis development: the transition to an upright gait and the development of a large brain. One type of hip morphology, coxa recta, is