

# Management of Adult Femoroacetabular Impingement Syndrome

## Background & Inclusion

Femoroacetabular impingement (FAI) syndrome is a motion related disorder of the hip that represents the symptomatic premature contact between the proximal femur and the acetabulum. FAI syndrome is associated with the presence of cam or pincer hip morphology or rotational abnormalities of the lower limb. Symptoms are often severe and limiting to everyday life. FAI syndrome is associated with labral tears and irreversible chondral damage. Left untreated symptoms often deteriorate and cam type FAI syndrome is associated with hip osteoarthritis.

## Inclusion/Exclusion Criteria

Inclusion: Adults with suspected FAI syndrome. Exclusions: Children <16y; Patients with secondary impingement (e.g. paediatric hip disorders, AVN, trauma).

## Diagnosis and assessment

1. FAI syndrome is diagnosed by the presence of symptoms, clinical signs and imaging findings.
2. Pain is the primary symptom of FAI syndrome. Pain is typically localised to the groin or hip, although it may also be felt in the back, buttock or thigh; pain is typically motion or position related. Mechanical symptoms, such as clicking, catching, giving way or stiffness are also reported in FAI syndrome.
3. Clinical examination often elicits pain during movements combining flexion, rotation, and abduction or adduction; these impingement signs are sensitive but not specific. There may be associated hypermobility, or an abnormality of rotational profile found on lower limb examination.
4. An AP radiograph of the pelvis, and a lateral femoral neck view of the symptomatic hip should be performed to look for the presence of cam or pincer morphology or other diagnosis (such as osteoarthritis). Radiographs can be reported as normal due to inexperienced clinicians.
5. Cross sectional imaging (e.g. CT +/- MRI) can be used for a more comprehensive assessment of hip morphology, lower limb rotational alignment, to assess for associated labral or chondral defects and other potential pain generators around the hip.
6. Diagnostic hip injections can be used to confirm the pain is from an intra-articular origin. Poor response to injection is a strong predictor of a poor outcome from surgery for intra-articular impingement. Extra-articular impingement may require site specific injections.

## Management

7. Surgical treatment of patients with FAI syndrome should be performed in a specialist centre for young adult hip/ hip preservation surgery. There should be clear referral pathway for clinicians who do not offer these services to tertiary/quaternary specialist centres.
8. Surgeons performing non arthroplasty procedures should have appropriate training and expertise.
9. The use of multidisciplinary team meetings to discuss complex cases should be considered as good practice.
10. Non-operative strategies include patient education, activity modification, analgesia (including intra articular steroid injections) and physiotherapist led rehabilitation. Patients with exacerbation of symptoms during physiotherapy, failure of non-operative measures and significant radiological abnormalities should be considered for surgery. Hip arthroscopy is the mainstay of operative treatment; however, open surgery may be required in certain cases.
11. Patients with significant arthrosis (Tonnis grade  $\geq 2$ ) or joint space narrowing on imaging should not be considered for non-arthroplasty surgery. These factors are associated with negative outcomes and early requirement for arthroplasty.
12. Patient education, weight loss and smoking cessation should be instigated prior to surgery where appropriate.
13. Pre- and post-operative Patient Reported Outcome Measures (PROMs) should be collected for all patients undergoing hip preservation surgery and entered into the UK Non-Arthroplasty Hip Registry (NAHR).
14. Post-operative rehabilitation should follow a dedicated pathway delivered by appropriately trained staff. Where geography dictates post operative rehabilitation can be delivered remote to specialist centre under the direction of the surgeon and specialist physiotherapist.

## Evidence base

Randomised trials, prospective and retrospective case series, systematic reviews and an evolved professional consensus.