Bare Bones

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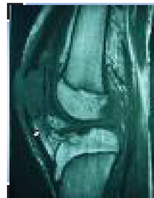

ARTHROSCOPIC MANAGEMENT OF OSTEOARTHRITIS OF THE KNEE

Dr David Christie

Recent advances in instrumentation and a growing understanding of the pathophysiology of osteoarthritis have lead to increased use of arthroscopy for the management of degenerative knee arthritis. Techniques include lavage and debridement, abrasion arthroplasty, subchondral penetration procedures (drilling and microfracture), and laser / thermal chondroplasty.

As with any procedural therapy of medicine, patient selection has a crucial role in the determining a successful outcome. Although the overall benefits of these procedures remain unclear, certain factors have been associated with a better or worst prognosis. Relevant prognostic factors for the success of arthroscopic management of knee osteoarthritis can be established (Table 1).

Knees with isolated lesions at the time of surgery fare better than do knees with diffuse disease. Also patients with higher pretreatment function fare better than did those with more severe dysfunction.

In most patients, short-term symptomatic relief can be expected with arthroscopic lavage and debridement through washout and dilution of destructive enzymes in the synovial fluid. Greater symptomatic relief can be achieved in patients who have acute onset of pain, mechanical disturbances from cartilage of meniscal tears / fragments, normal knee alignment and minimal radiographic evidence of degenerative disease.

Subchondral drilling and microfracture of the subchondral bone stimulate the formation of cartilage by disrupting subchondral blood vessels and allowing primitive mesenchymal cells to migrate to the surface and differentiate into chondroblasts and chondrocytes. Fibrocartilage scar rather than hyaline cartilage is produced. Criticism of these techniques is the repair tissue lacks the durability and functional capacity of normal articular hyaline cartilage.

Partial meniscectomy in osteoarthritic patients with a documented tear and mechanical symptoms appears to be an effective procedure for pain relief at short-term follow-up. However as the severity of osteoarthritis increases these results become less favourable.

With proper selection, patients with early degenerative arthritis and acute mechanical symptoms of locking or catching can significantly benefit from arthroscopic surgery.

Table 1 :Prognostic Factors for Arthroscopic Treatment of degenerative Arthritis of the Knee

Factor	Good Prognosis	Poor Prognosis
History / Symptoms	Increased pain of acute onset, specific twisting mechanism, mechanical symptoms	Penidind litigation/work injury, chronic symptoms
Physical examination	Recent effusion	Varus/valgus alignment, ligamentous instability
Radiographic findings	Loose bodies, normal emchanical alignment	Complete loss of joint space, chondrocalcanosis, varus/valgus alignment
Surgical findings	Isolated chondral flap/fracture, isolated unicompartmental disease, meniscal tears	Diffuse disease, degenerative meniscal tears, severe chondromalacia

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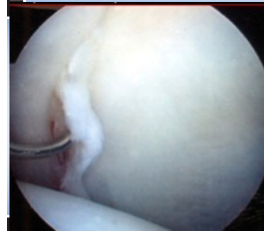


HIP ARTHROSCOPY ON THE GOLD COAST

Dr Angus Nicoll

Recent improvements in technology and surgical technique have ensured the field of hip arthroscopy is of growing importance.

Indications for hip arthroscopy include loose bodies, labral tears, chondral injuries and impingement. There is a limited role for hip arthroscopy in diagnosing unresolved hip pain. In general, hip arthroscopy is not reliably beneficial to the patient with established osteoarthritis of the hip. Good to excellent results can be expected with careful patient selection. For example, around 80% of patients treated with a labral tear will report a successful outcome.

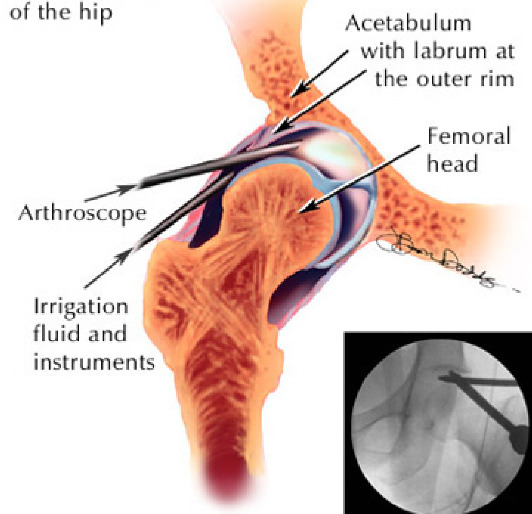
Characteristic features of intra-articular hip pathology include difficulty with torsional / twisting activities, discomfort with prolonged hip flexion (eg sitting), catching with resisted flexion to extension (eg rising from a seated position) and relatively well tolerated straight plane activity. Plain films are examined and often MRI arthrogram will greatly assist in the diagnosis, although it is not uncommon for the final diagnosis to be only established at arthroscopy.

During the procedure the anaesthetised patient is positioned on an operating table with a specific hip positioning system. X-ray control is used to ensure safe and effective introduction of instrumentation. Two to four small incisions 1–2 centimeters long are made in the skin during the procedure.

The small risks associated with hip arthroscopy have been associated with prolonged or excessive traction and portal placement. Specific hip positioning systems for use with operating tables and portal guide systems have been developed to minimise risks. Hip specific cannulas, portals, electrothermal probes, shaver blades, burrs and suture anchor systems have improved the efficiency and efficacy of the procedure.

Hip arthroscopy typically involves a day or overnight stay. In the post operative period, protected weight bearing with crutches is often advised for 2-4 weeks, early range of motion exercises are beneficial; weight training and sporting activities are avoided for 1 month.

Previously, many patients from the Gold Coast area were referred to Brisbane for hip arthroscopy surgery. Latest generation techniques, hip positioning equipment and instrumentation systems are now available for use on the Gold Coast.



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