

Hip Arthroscopy Guidelines

Introduction

Surgery: the hip is distracted allowing access through 2-4 antero-lateral portals

Indications for surgery: reduce symptoms of hip and/or groin pain, clicking, catching, stiffness, giving and way and facilitate potential return to function/sport

Expected Length of Stay: day case or overnight

Surgeons: Mr Paul Gaston

Scope of practice

These guidelines are designed to guide physiotherapists when treating patients following this surgical procedure. These guidelines were produced by a process of systematic review of the current evidence based literature, medical and peer consultation. They were correct at the time of writing. The guidelines should be used in conjunction with the clinical reasoning skills of the physiotherapist and patients should always be treated on a case-by-case basis.

Aim

The aim of these guidelines is to provide physiotherapy staff with a series of recommendations from the current evidence base to assist them in the management of patients who have undergone this surgical procedure.

Literature review question

What is a safe and effective rehabilitation programme following hip arthroscopy from day of surgery to return to function and sport in order to maximise outcome?

Search Process

Appraisal process: the databases below were searched between 1996 and July 2018. Medline and Embase were searched in the first instance. The titles and abstracts of all identified studies were assessed to determine whether they were pertinent to the research question. The initial searches were then carried out on the other databases and the results combined to ensure articles were not duplicated.

Total number of articles selected: 37

Total number of articles included: 23

CASPs used: 4

Data Bases:

Data Base	Dates	Limitations
Medline	1996 to July 2018	English
Embase	1996 to July 2018	English
Pedro	1996 to July 2018	English
Pubmed	1996 to July 2018	English
Cochrane	1996 to July 2018	English
NICE	1996 to July 2018	English
Cinahl	1996 to July 2018	English

Key Words:

Hip AND Arthroscopy OR Labral Debridement OR Labral Repair OR Microfracture OR Chondroplasty OR Femoroacetabular Impingement	AND/OR
	Physiotherapy
	Physical Therapy
	Rehabilitation
	Exercise
	Sport
	Proprioception
	Outcome Measures/Outcomes

Results

From the literature search, 23 articles were selected. One randomised controlled trial was found comparing the effectiveness of hip arthroscopy with best conservative care in treating patients with femoroacetabular impingement syndrome (Griffin et al, 2018). One recorded the feasibility study for the previous randomised controlled trial (Griffin et al, 2016). Two were systematic reviews of surgery and rehabilitation for hip impingement post hip arthroscopy (Wall et al, 2014; Grzybowski et al, 2015). One article was a systematic review of physiotherapy for acetabular labral tears (Orbell & Smith, 2011) whilst another was a literature review (Voight et al, 2010). 17 articles were clinical commentaries based on expert opinion or single case studies.

Key Points :

- Hip arthroscopy and personalised hip therapy both improved hip-related quality of life for patients with femoroacetabular impingement syndrome. Hip arthroscopy led to a greater improvement than did personalised hip therapy, and this difference was clinically significant. Further follow-up required to assess if the clinical benefits of hip arthroscopy are maintained and whether it is cost effective in the long term, (Griffin et al, 2018)
- Prior to this, no research studies have been completed that are of sufficient quality to accurately determine the benefit and safety of surgery for femoroacetabular impingement, (Wall et al, 2014).

- Rehabilitation must be individualised and should incorporate an evaluation based programme designed to address surgical findings, procedure and patient individual characteristics (Wahoff & Ryan, 2011; Domb et al, 2016). Rehabilitation should not be based around timelines unless advised by the Orthopaedic Surgeon (see precautions for labral repairs).
- Most post-operative protocols are based upon basic tissue healing properties, patient tolerance and clinician's experience (Edelstein et al, 2012; Enseki and Kohlrieser, 2014).
- Aside from the Griffin et al (2018) study, minimal other evidence-based literature exists regarding the specific type of post-operative rehabilitation (Edelstein et al, 2012; Grzybowski et al, 2015). The literature describing rehabilitation following hip arthroscopy, for the most part, is limited to clinical commentaries and case series (Enseki and Kohlrieser, 2014).
- There are no weight-bearing restrictions post-operatively.
- ROM restrictions only exist in the case of labral repairs with no flexion beyond 90 degrees for 4 weeks and no deep medial rotation beyond 90 degrees flexion until 12 weeks post-operatively.

Recommendations

Phase 1

Immediate post-op to outpatient physiotherapy appointment (usually within 7-10 days)

Precautions: timescales are approximate and will depend on surgical procedure.

Labral debridement, chondroplasty and microfracture – Encourage normal gait pattern, weight-bear as tolerated (WBAT) with or without elbow crutches. There are no longer any WB time restrictions for these patients.

Labral Repair – no hip flexion beyond 90° for 4/52 and no Flexion/MedRot for 12/52. These restrictions allow time for the labral repair to develop maximal strength. Encourage WBAT gait pattern with or without elbow crutches.

It is advisable to avoid exercises that actively engage iliopsoas in the first few week following surgery (Sherry, 2011).

Progression through each stage of rehabilitation is guided by pain, normal gait pattern, good muscle recruitment and patient tolerance (Edelstein et al, 2012).

Goals	Recommendations	
Manage Pain	Analgesia/NSAIDs as required	C
	Ice as required	
	Education of surgical procedure & healing process	
Restore ROM & Reduce Adhesion Formation	Active, Active-Assisted & Passive ROM exercises (within surgical restrictions)	C
	Prone-lying	
	Gym Ball ROM exercises trunk/pelvis	
	Resistance-free Exercise Bike	
Normalise muscle recruitment patterns	Isometric transverses abdominus, gluteus maximus & quadriceps exercises	C
Normalise gait pattern	WBAT with or without elbow crutches	C
Reduce effects of immobilisation	Basic circulatory exercises	C

Phase 2

From initial outpatient physiotherapy appointment to end of surgical restrictions (7-10 days to 4 weeks)

Precautions: timescales are dependent on surgical procedure.

Labral debridement, chondroplasty and microfracture – Encourage normal gait pattern, weight-bear as tolerated (WBAT) with or without elbow crutches. There are no longer any WB time restrictions for these patients.

Labral Repair – no hip flexion beyond 90° for 4/52 and no Flexion/MedRot for 12/52. These restrictions allow time for the labral repair to develop maximal strength. Encourage WBAT gait pattern with or without elbow crutches.

It is advisable to avoid exercises that actively engage iliopsoas in the first few weeks following surgery (Sherry, 2011).

Progression through each stage of rehabilitation is guided by pain, normal gait pattern, good muscle recruitment and patient tolerance (Edelstein et al, 2012).

Goals	Recommendations	
Manage Pain	Analgesia/ NSAIDs as required Advice & education Activity Modification if required	C
Restore ROM & Reduce Adhesion Formation	Improve ROM within pain tolerance & surgical restrictions: ROM – as previous plus circumduction, quadraped rocking and kneeling internal/external rotations. Manual therapy techniques – joint mobilisations, distractions, soft-tissue techniques (MFR foam rollers). Anterior capsule stretches physio assisted. Hydro (if available) Exercise Bike	C
Normalise muscle recruitment & establish early strengthening regime	Progression of isometric to isotonic exercises Introduce core & general LL strengthening exercises with particular emphasis on Gluteus Medius function (OKC/CKC) and reducing over-activation of hip flexors & adductors. Gluteus maximus in prone.	C
Normalise gait pattern	FWB as tolerated. Ensure normal gluteal activation without a Trendelenburg gait.	C
Increase neuromuscular control & proprioception	Commence basic balance and stability exercises: Trunk stability: double → single leg bridge Proprioception: progressing level of difficulty (double → single leg; stable → unstable; eyes open → closed)	C

Phase 3

From 4 weeks to discharge

Precautions:

Labral Repair – can now introduce hip flexion beyond 90° gently, but still avoid Flex/MedRot until 12/52 post-op in order to protect the labral repair.

Progression of rehabilitation through this stage is governed by having a pain-free and non-irritable hip, a normal gait pattern, optimal lower limb motor control, ROM, strength and proprioception to allow full recovery.

Progress through this stage at a pace tolerated by the patient and appropriate for the surgical procedure. Labral repairs will be significantly slower getting through this stage.

Goals

Recommendations

Restore full ROM and normal muscle lengths

Progress to full end-ROM as symptoms permit for labral debridement, chondroplasty and microfracture patients. Labral repairs should avoid Flex/MedRot until 12/52 post-op. C

Stretching all trunk & lower limb muscle groups as required. C

Restore functional strength, endurance and neuromuscular control

Strengthening of local and global muscles group through: C
OKC & CKC exercises
BW exercises – squats, lunges (unilateral and multidirectional), step-ups, side dips, bridging, crab walk etc.
Gym – resistance equipment

Build endurance and CV fitness – bike, cross-trainer, rowing machine, swimming (no breaststroke legs for labral repairs until 12/52 post-op). Progress to jogging as hip tolerates. C

Restore Neuromuscular Control through: C
Gymball/TRX
BOSU/trampoline/wobble boards/sit-fits for dynamic balance challenge
Progressive agility work– static, transitional and dynamic stabilisations are phases of agility progression. CKC loading with conscious motion control and high joint tolerance, then progress to unconscious control with loading of the joint.

Return to full pain-free function and/or sport	End stage and sports specific agility work – progress to fast-speed, multi-directional and more complex tasks. e.g. acceleration/deceleration drills, straight line running, figure of eight running and agility drills Commence plyometric drills. Progress to functional rehabilitation relative to activity and/or sport.	C
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Suggested functional outcome measures prior to plyometric and sports-specific rehabilitation

Pain-free & non-irritable hip		C
Functional Tests – normative values		C
Plank		
Side Plank		
Gluteus Medius		
Gluteus Maximus		
1RM – leg press, Quadriceps, Hamstrings (based on ACL-R guidelines)		
Dynamic Balance test - STAR		
Hop tests – single hop for distance, quadruple cross-over hop test		
International Hip Outcome Tool (iHOT-33) (Griffin et al, 2018)		A1
Hip Outcome Score (HOS)		

Return to Activities/Sports – Approximate Timescales

Please note that these timescales should only be used for **GUIDANCE**.

Driving	Once fully weight-bearing, mobilising normally and able to perform an emergency stop with confidence.
Swimming	Swimming once portals healed but avoid vigorous crawl kick for 8/52 due to anterior capsulotomy. Avoid breast-stroke kick until 12/52 post-labral repair surgery.
Running	Depends on lumbo-pelvic control, LL strength and hip discomfort. Simple debridement may be able to commence jogging within 6-8/52. Patients undergoing microfracture and labral repair will be much slower.
Non-Contact Sports	Sport dependent – from 3/12 onwards. Ensure rehabilitation involves agility and plyometrics, and the hip is pain-free with these drills prior to commencing sport.
Contact sports	When ready – from 4/12 but depends on surgery and rehabilitation progress.

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Expectations

Restoration of normal ROM, gait and strength allowing a return to a full level of activity and function.

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