

# Hip problems in general practice

Chris Milne

Correspondence to: [chris@angleseaphysioandsports.co.nz](mailto:chris@angleseaphysioandsports.co.nz)

## Introduction

Most general practitioners see one or two patients each week with hip, buttock or groin pain – that's 50 to 100 patients a year with these problems. Therefore, the doctor needs an efficient system for making an accurate diagnosis and then instituting appropriate management.

## Clinical evaluation

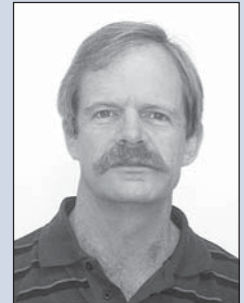
### a. History

Pain usually presents in one of three locations:

- i. *The groin* – which is the usual site of pain arising from the hip joint itself.
- ii. *The lateral hip* – which usually indicates pain arising from the gluteus medius tendon and its insertion.
- iii. *The buttock* – which usually indicates referred pain from the low back or sacroiliac joint.

It is important to ascertain whether the pain is of acute onset, e.g. related to an injury, or insidious (gradual) onset. For acute injuries always try to establish the mechanism of injury (e.g. forced abduction) as with this information, coupled with knowledge of the relevant anatomy, you can often make a specific tissue diagnosis. Ask about associated features. Night pain and morning stiffness may indicate arthritis. Referred pain down the leg, especially if accompanied by a cough impulse, sensory alteration or

*Chris Milne is a Sports Physician in Hamilton. He has previously worked in general practice for 15 years, and tries to keep a primary care perspective on the clinical problems he sees. He has been a team doctor to NZ Olympic and Commonwealth Games teams and for the Chiefs Super 12 rugby team from 1997–2003.*



motor weakness, may be a pointer to a lumbar disc prolapse.

Ask about treatment to date. These days many people with musculoskeletal pain present initially to a physiotherapist, osteopath or chiropractor. Try to ascertain whether or not any prior treatment has been effective. Systemic symptoms, e.g. fever, particularly in the presence of skin sepsis, may be a pointer to the rare but treatable problem of septic arthritis.

### b. Examination

Watch the patient as they walk into your room – if they walk with a limp or have a Trendelenburg gait these are useful signs to record. Once the patient is lying on the examination plinth, I usually start by gently rocking each hip; pain with this manoeuvre results from a hip capsular problem, active radiculopathy or an element of functional overlay. Next, I check the range of motion. A capsular pattern of restriction results in painful limitation of internal rotation followed by flexion. Look for a bulge

in the inguinal region or a positive cough impulse, which may indicate a hernia. Testing of resisted movements may elicit pain relating to specific muscle groups as listed below:  
*Adduction* – adductor group (especially adductor longus)  
*Abduction* – gluteus medius  
*Flexion* – iliopsoas or rectus femoris.

## Investigations

Plain x-rays are the initial investigation of choice in virtually all cases. In osteoarthritis they may reveal joint space narrowing above the femoral head and marginal osteophytes around the femoral head or acetabulum. The correlation between x-ray changes and clinical symptoms is not 100%, so treat the patient not their x-rays! If you suspect a teenage patient may have a slipped upper femoral epiphysis (SUFE) you should order frog leg views and specifically question this diagnosis on your request form. X-rays can also show avulsion injuries from various sites in the patient who is yet to at-

Table 1. Hip (groin) pain

Presentation	Clinical Diagnosis	Investigations	Management
<b>1. Younger patient</b> History of strain Tender adductor longus Pain on resisted adduction	Adductor longus strain ? partial tear	Xray Ultrasound	1. Adductor stretches 2. Concentric then eccentric strengthening 3. Injection
<b>2. Older patient</b> Gradual onset Night pain Quadrant restriction	Osteoarthritis	Xray	1. Analgesics 2. NSAIDs 3. Weight reduction 4. Visco-elastic shoe inserts 5. Glucosamine/Chondroitin
<b>3. Rare – not to be missed</b> a. Overweight teenage patient b. Any age: Distance runner Dancer Gymnast Painful quadrant restriction Amenorrhoea Hop test positive c. Any age: Corticosteroid use (Asthma, inflammatory bowel disease, etc.) d. Niggling groin Tender symphysis	Slipped upper femoral epiphysis  Stress fracture femoral neck  Avascular necrosis of femoral head  Osteitis pubis	Xray including frog view  Xray Bone scan Diet diary DEXA scan  Xray MRI scan  Xray MRI scan	Orthopaedic registrar – same day  Crutches Orthopaedic surgeon Multidisciplinary team  Crutches Orthopaedic surgeon same week  NSAID Rest from running-based sports

Table 2. Lateral hip pain

Presentation	Clinical Diagnosis	Investigations	Management
Lateral hip pain Tender at trochanter Pain on resisted abduction	Gluteus medius insertion strain	Xray Ultrasound	1. Concentric then eccentric strengthening exercises 2. Injection 3. Surgery in some cases

Table 3. Buttock pain

Presentation	Clinical Diagnosis	Investigations	Management
1. Low back pain Sciatica Cough impulse Sensory motor reflex change	Referred pain from low back (or SI joint)	Xray MRI scan	1. Extension exercises 2. Lumbopelvic stability exercises 3. Epidural steroid injection 4. Disc surgery
2. History of injury Pain over ischial tuberosity, especially sitting on hard surface	Hamstring origin strain	Xray Ultrasound	1. Concentric then eccentric exercises 2. Injection

Table 4. Pain and clicking in or around the hip

Presentation	Clinical Diagnosis	Investigations	Management
1. Groin	Iliopsoas tendon	Xray	1. Concentric then eccentric strengthening 2. Ultrasound-guided injection 3. Rarely surgery
	Labral tear	MR arthrogram	Hip surgeon with subspecialty expertise in these problems
2. Lateral hip	Iliotibial band (ITB) friction	Xray Ultrasound	1. ITB stretches 2. Occasionally injection

tain skeletal maturity. Some of these are detailed below:

*Anterior superior iliac spine (ASIS)*

– sartorius origin

*Anterior inferior iliac spine (AIIS)*

– rectus femoris origin

*Greater trochanter*

– gluteus medius insertion

*Lesser trochanter*

– iliopsoas insertion

*Ischial tuberosity*

– hamstring origin

High-technology imaging (e.g. CT, MRI and isotope bone scans) should mainly be ordered by specialists. CT scans can show bony detail the most clearly (e.g. complex pelvis fractures). Modern digital reformatting can show imaging in any plane. MRI scans can demonstrate a combination of bone and soft tissue problems. In the investigation of pain around the hip, MRI is most useful for demonstrating conditions such as labral tears of the hip, avascular necrosis and bone oedema associated with osteitis pubis. MRI of the lumbar spine can show lumbar disc lesions, but needs correlation with the clinical picture as age-related MRI changes in lumbar discs are very common. Isotope bone scans can show stress fractures and also show increased uptake in sacroiliac and other joints in cases of seronegative inflammatory arthritis.

Blood tests are occasionally of value. If you suspect inflammatory arthritis, start with a full blood count, ESR and C-reactive protein. If all of these are normal, the chance of the

patient having a rheumatic disease is very low.

### Diagnosis

Once you have assembled the history and examination findings together with any relevant investigation results, you should be able to make a working diagnosis. To guide you I have listed the most likely diagnoses and their management in Tables 1 to 4.

Occasionally patients will have mixed pathology, e.g. a patient with known osteoarthritis of the hip will slip and fall, straining an adductor muscle. Patients should be informed of the diagnosis using terms appropriate to their knowledge and life experience. In my experience, patients with lateral hip pain are generally delighted to hear that they do not have osteoarthritis as this is their common fear.

### Management

This depends on the problem and should be tailored to the person's individual circumstances and lifestyle. As you, the GP, have prior knowledge of these issues, it follows that you are in the best position to provide appropriate advice. If the diagnosis is reasonably clear, proceed as per the treatment advice in Tables 1 to 4. If the diagnosis is unclear and there is reasonable suspicion of serious treatable pathology (e.g. fracture or septic arthritis) then referral to the

orthopaedic registrar the same day is recommended. If the matter is not so urgent, you may elect to treat for the most likely possibility and be prepared to revise your diagnosis if the clinical progress is not as expected.<sup>1</sup> This is one of the hallmarks of the astute clinician.

### Which specialist to refer to?

Depending on local availability and the clinical problem you suspect, it may be an orthopaedic surgeon, musculoskeletal or sports physician, or rheumatologist.

If specialist clarification of the diagnosis is not required, you should consider referral to an appropriate manual therapist. Most often this will be a physiotherapist but there may be times when an osteopath or chiropractor is more appropriate. The expectation is that the patient should receive a graded rehabilitation package. Generally this involves settling the acute pain, restoring

range of motion and normal muscle balance and then proprioception (joint position sense). For problems around the hip, restoration of core stability via retraining of the relevant muscles is particularly important.

### What else can you do?

Education of the patient as to the diagnosis and its recommended

**For problems around the hip, restoration of core stability via retraining of the relevant muscles is particularly important**

treatment is crucial. Diagrams such as those in Netters' Atlas,<sup>2</sup> Peterson and Renstrom's<sup>3</sup> or Brukner and Khan's<sup>4</sup> excellent texts are very helpful in this regard.

Provide adequate pain relief. This may be paracetamol or traditional NSAID or a COX-2 agent depending on the circumstances. Relative rest of the injured part is helpful, however full rest of the hip area requires bedrest and this is rarely indicated. Activity modification (e.g. substituting swimming or cycling for running training) is a key strategy.

Local corticosteroid injections have a definite place in management of certain conditions (e.g. adductor muscle strain that is slow to resolve) but the injection needs to be performed by a doctor who has adequate training and experience in these procedures. For certain deep seated injections (e.g. around the iliopsoas tendon) injection under ultrasound-guidance is useful. The patient needs to understand that the injection is not the whole treatment but part of a pack-

age which should include appropriate muscle rehabilitation.

Finally, the role of surgery is to address significant structural problems (e.g. a labral tear) or when there has been failure of more conservative treatment (e.g. adductor tendon release for chronic adductor tendon problems). The timing of surgery for osteoarthritis of the hip is a personal matter between patient and surgeon, however significant breakthrough pain despite full-dose analgesics, reduced functional capacity (e.g. walking distance) and the need for a walking stick are all relevant factors.

### Summary

Hip problems can be a challenge but standard clinical evaluation will usually enable you to make a working diagnosis. Treatment can then be tailored accordingly. Seek early specialist review if the diagnosis is unclear and involve an appropriate manual therapist in the patient's rehabilitation.

### Competing interests

None declared.

## Key Points

- For acute injuries always try to establish the mechanism of injury.
- Watch the patient as they walk into your room.
- Plain x-rays are the initial investigation of choice in virtually all cases.
- If the diagnosis is unclear and there is reasonable suspicion of serious treatable pathology (e.g. fracture or septic arthritis) then referral to the orthopaedic registrar the same day is recommended.
- Local corticosteroid injections have a definite place in management of certain conditions.
- The patient needs to understand that the injection is not the whole treatment but part of a package.

### References

1. McCrory, P. Elementary, my dear Watson. *Brit J Sports Med* 2006; 40(4): 283-284.
2. Netter, F. The CIBA collection of medical illustrations, Vol 8(i) Musculoskeletal system. CIBA-Geigy Summit, New Jersey 1987.
3. Peterson, L and Renstrom, P. Sports injuries, 3rd edition. London: Martin Dunitz; 2001.
4. Brukner, P and Khan, K. Clinical sports medicine, 2nd edition. Sydney: McGraw-Hill; 2001.

## Prognosis of trochanteric pain in primary care

*'The incidence of trochanteric pain in primary care is 1.8 patients per 1000 per year. After 1 year at least 36% still suffered from trochanteric pain, and after 5 years this was 29%. Patients with osteoarthritis (OA) in the lower limbs had a 4.8-fold risk of persistent symptoms after 1 year, as compared to patients without OA. Patients who had received a corticosteroid injection had a 2.7-fold chance of recovery after 5 years, as compared with patients who had not received an injection.'*

Lieveense A, Bierma-Zeinstra S, Schouten B et al. *Br J Gen Pract*. 2005; 55(512):199-204.

## Acetabular Labral Tears of the Hip: Examination and Diagnostic Challenges

*'Once considered an uncommon entity, labral tears have recently received wider recognition as a source of symptoms and functional limitation. Information regarding acetabular labral tears and their association to capsular laxity, femoral acetabular impingement (FAI), dysplasia of the acetabulum, and chondral lesions is emerging.'*

Martin RL et al. *J Orthop Sports Phys Ther*. 2006;36(7):503-515. doi:10.2519/jospt.2006.2135.