CG APPROVED

Patient Information following Surgery for Fixation of Pelvic Ring Injury

Major Trauma Centre Collaborative Cheshire and Mersey Network

NHS Liverpool University Hospitals NHS Foundation Trust

Major Trauma Ward

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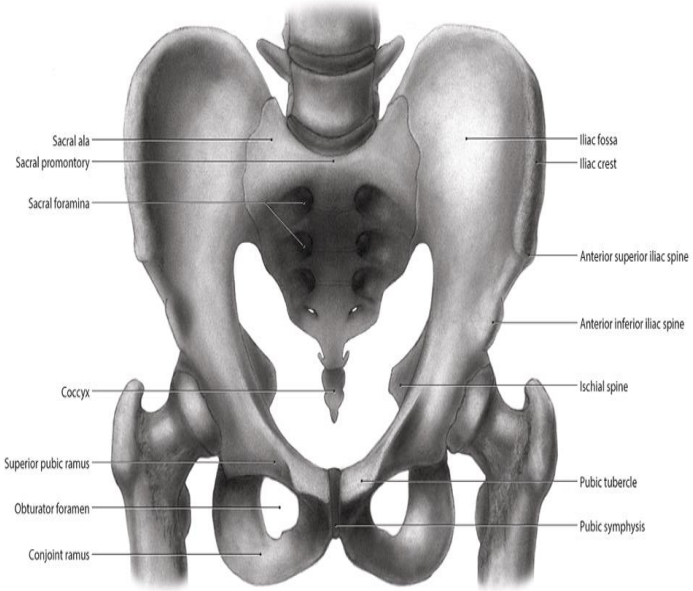

Ho, K (2013-2014) photograph, viewed 12 January 2015, http://karynho.com/gallery/HipBones.html.

You have sustained injuries to the pelvic bones that have required surgery.

What is the Pelvis?

The pelvis is a ring made up of two bones joined at:

- the back by the sacrum (tail bone), which is the lowest part of the spine
- the front by the pubic symphysis (a cartilage joint).

The pelvis protects

- the bladder
- the bowel
- the organs of sexual reproduction
- the blood vessels and nerves which go to our legs.

When walking and sitting your body weight is transmitted through the pelvis

How did I Injure my Pelvis?

Pelvic fractures are uncommon, and generally occur from:

- road traffic accidents
- falls
- sporting injuries (less common).

In general a pelvis can be broken in the following ways,

- crushed from side to side,
- pushed apart from front to back,
- or one half can move vertically away from the other (as may happen when landing on one foot from a fall).

After all pelvic fractures the pelvis can have a range of stability, from broken but undisplaced & completely stable to displaced completely unstable.

The stability of your pelvis depends partly on the direction in which it was broken, and partly by the amount of force that broke it. Not all fractures need an operation.

How is a pelvic fracture diagnosed?

You would have under gone x-rays and maybe a scan (CT scan) so that the surgeon can decide the best way to treat your pelvic injury.

Sometimes it is necessary to take you to the operating theatre and test the stability of your pelvis using x-rays before a decision whether to operate can be made.

The Operation

If you require surgery, this can be done in several ways, the exact surgical plan will be discussed with you before you are asked to consent (agree) to surgery.

Aintree Major Trauma Centre has 4 specialist Surgeons who operate on all Pelvic Fractures in the Cheshire & Mersey Major Trauma Network.

Surgery may include operations:

- at the front of the pelvis
- at the back of the pelvis
- at both the front and back

or a fixator may be placed at the front of the pelvis but on the outside.

The three most common methods of treating a pelvic injury
are:

1. **External Fixator**: This is a metal frame, which is attached to the front of the pelvis on the outside of your body.

This is to correct the position of the bones and prevent movement of the injury. This is often put on during the early stages of treatment. You can go home with this on and return later for it to be removed. This option is used rarely nowadays.

2. **Internal Plates and Screws**: These go directly against the bone to correct the position and prevent movement. This is the most common operation.

After surgery, how much weight you are allowed to put through each leg will depend on your fracture and how it is fixed – this is different for every patient and will be discussed with you at length.

3. **In-Fix**- this is a procedure similar to the an external fixator that is inserted under the skin. This may need removing.

Your orthopaedic pelvic consultant will discuss the details of the operation that you have had, and decide on any restriction to your mobility following surgery, and for how long.

Risks or complications

There are a number of complications that can occur after pelvic fractures, usually related to the injury but occasionally to surgery. It is important that should you become aware of any of these you tell us, as early treatment can be more effective.

1. Bleeding

Due to the amount of blood vessels that your pelvis has supplying it can lead to a fatal bleed.

2. DVT or Pulmonary Embolism

3. Need for further surgery

Depending on the type of fracture and operation you under go, there is a possibility of staged procedures. This will be discussed with you by your Pelvic surgeon. A CT Scan is routinely performed after your Pelvic Surgery post-operatively & sometimes this shows further surgery is required before discharge.

4. Chronic Pain

5. Bladder Injury

The bladder can be injured, this is obvious if there is blood in the urine, but bladder injury can also cause:

- pain or difficulty with passing urine
- a need to pass urine much more frequently than before.

6. Sciatic Nerve Injury

The most common early complication of this fracture is nerve damage, most often the sciatic nerve. This is a large nerve that passes down the back of your thigh and branches into the lower leg. Symptoms can vary and include numbness or pain in the foot, calf or thigh, weakness of the foot and ankle, or complete inability to move the leg.

Other nerves can also be damaged, leading to similar symptoms in other parts of the leg. Nerve injuries can take many months and sometimes years to recover, having no recovery at all is very unusual. If the sciatic nerve is injured by the fracture then it will usually be looked at during surgery, and more information can be obtained regarding the likelihood of recovery.

7. Sexual Function

Numbness can also occur:

around the perineum (pelvic floor area, this is a large group of muscles which pass from your pubic bone in the front of your pelvis to your coccyx (tail bone) behind))

- on one side of the penis. Some nerve damage can cause problems with sexual function (in both men and women) including difficulty in achieving an erection for men.
- We realise this is a sensitive issue, but should this be a problem it is advisable to mention this to your doctor/ physiotherapist. This may be a short-term problem following your injury.

  However, should this continue to be a concern you should mention it to your doctor at your follow up clinic appointment. They can then refer you to the Urology team who specialise in this field.

8. Infection

Infection is another possible complication, against which many measures are taken including antibiotics at the time of surgery. Infection usually presents with:

- pain
- redness
- discharge (oozing) from the wound
- occasionally a feeling of being generally unwell.

If you think your wound is infected after you have left hospital you should contact your GP. If they want to admit you to hospital it is best if you are re-admitted to Aintree University Hospital

9. Arthritis

The biggest long term complication of a broken pelvis is the development of arthritis. The main reason we operate on these fractures is that we know from past experience that if we leave the fractures in a poor position, although they will often heal, arthritis may follow within five years.

This is mainly because of the amount of damage done to the joint surfaces at the time of injury. This means that even if the pieces are put back together perfectly, the cartilage (soft tissue) on the joint surface is damaged beyond repair. In some cases the bone is crushed and simply doesn't fit back together properly, or the bone loses its blood supply and dies over the next two years.

However, even in these complex cases, many patients will avoid arthritis for many years after successful surgery and it is therefore generally the best option.

If you do develop arthritis then occasionally you may require a total hip replacement in the future.

Therapy

The joint therapy team of physiotherapists and occupational therapists will have carried out detailed assessments of your needs, and given you a plan for discharge or on-going rehabilitation. There may be a need for you to be transferred to rehabilitation during the recovery period.

Assessments will take place to identify any equipment that you will need for discharge. (We do not normally provide wheelchairs for short term use. If the therapists feel you would benefit from having a wheelchair you will be provided on details of how to loan one.)

- Continue the previous exercises you were shown before the operation.
- The physiotherapist will help you move your hip joint:
    - up and down (flexion and extension)
    - out to the side and back (abduction and adduction)
    - turn it in and out (internal and external rotation).

The physiotherapist will show you some additional exercises and advise you when to start them. A paper copy of the exercises will be provided by the physiotherapy team .

WOUND CARE

Your wound may have clips or stiches in situ. These are normally removed 10 to 14 days following the operation. Wounds are normally kept covered until this time.

Try to keep your dressing clean and dry. If you have any problems with your dressing whilst at home, please contact the ward for advice (alternatively contact your GP or local pharmacy). Avoid soaking the wound (such as bathing or swimming).

If your wound shows any signs of infection (such as swelling, increased pain, redness, discharge etc) please seek medical advice.

If you are discharged from hospital before your skin closures are removed, arrangements will be made for you to be seen in the fracture clinic, and treatment room or via your GP. You will be given details to confirm arrangements that have been made.

MEDICATION AND PAIN RELIEF

You will be given pain relieving medication to take home with you, please take as prescribed to prevent pain building to an intolerable level. (Please follow advice on medication packaging). We normally provide a 1 week supply of medication on discharge.

A discharge summary letter will be sent to your GP with details of your hospital stay, and a current list of your medication. We will normally provide you with a copy of this letter with your medication on discharge.

Regular pain medication may cause constipation. If this occurs please see your local pharmacist for advice.

DRIVING

If you drive, please liaise with your consultant team and DVLA to discuss when it is safe for you to resume. If you drive against medical advice, your insurance may be void.

Pregnancy

We advise pregnant females who have under gone surgery for their pelvic fracture, to let your midwife know about your pelvic injury. Your midwife will refer you to a gynaecologist, who will then seek advice from your pelvic surgeon

VTE (venous thrombo-embolism)

VTE is a collective term for 2 conditions:

- DVT (deep vein thrombosis) – this is a blood clot most commonly found in a deep vein that blocks the flow of blood.

- PE (Pulmonary embolism) – a potentially fatal complication where a blood clot breaks free and travels to the lungs

Whilst you are less mobile, the risk of VTE is higher.

VTE is a major health risk in the UK. Your consultant will discuss with you if intervention with anticoagulation (blood thinners) is required.

Things that you can do to prevent VTE:

- Mobilise as instructed by the consultant and therapy teams
- Keep well hydrated – drink plenty of water
- We strongly advise you not to smoke. This is a great opportunity to stop smoking. The ward staff or your GP can help you to access smoking cessation services
- Occasionally you will be given Flowtrons whilst in your hospital bed to help pump your blood from your calves around your body
- If you have been recommended anticoagulation therapy, please comply fully with the treatment for the duration of the course

Most patients who have suffered a fractured pelvis will go home with 6 weeks (post operation) blood thinning injections. Your Consultant, Pharmacist and Nursing team will speak to you re this.

Symptoms

Calf swelling – you may already have some swelling of the legs, but increase in swelling needs to be assessed.

- Calf tenderness and increased pain
- Heat and redness in one or both legs
- Unexplained shortness of breath
- Chest pain when breathing in

A BLOOD CLOT CAN OCCUR WITHOUT ANY SYMPTOMS. IF YOU HAVE ANY CONCERNS SEEK IMMEDIATE ADVICE.

USEFUL CONTACTS

- Major Trauma Nurse Practitioners:
- Major Trauma Nurses 24hr answering machine. Leave name contact number and short message. Telephone number 0151 529 2551
- Nursing staff on Major Trauma Ward: Telephone number: 0151 529 6255
- If you think that your condition is serious then it is best to go straight to your local Emergency department*.
- FRACTURE CLINIC
  (Monday to Friday)
  (0151) 529 2554
- NHS DIRECT 111

If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

Tel No: 0151 529 2906

Email: interpretationandtranslation @liverpoolft.nhs.uk