Vascular Surgery
Open Repair Inguinal Hernia

What is an inguinal hernia?
An inguinal hernia is a swelling in the groin area caused by a weakness in the muscles of the abdominal wall. The swelling occurs because part of the lining of the abdominal cavity (peritoneum) pushes through the area of weakened muscle. A lump then appears because this lining often contains a loop of intestine within it. The lump can often disappears spontaneously when patients lie down, although gentle pressure over the lump is sometimes needed to do this.

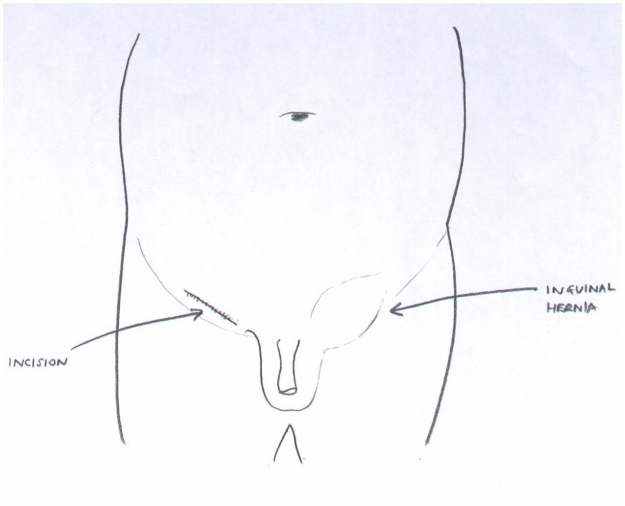

Diagram 1

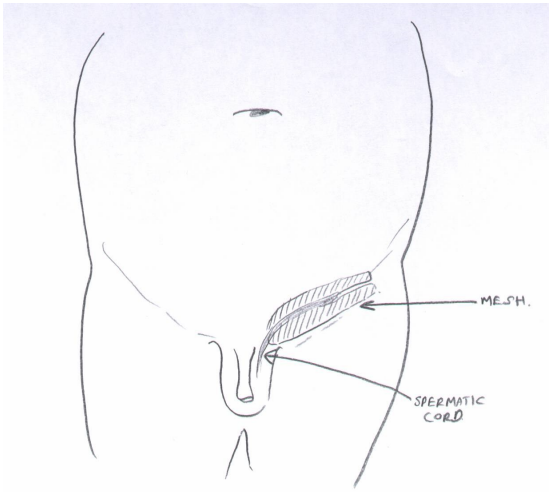

Diagram 2

Why do hernias occur?
Heavy lifting, particularly in those doing manual work, is often a cause of inguinal hernia. Patients with a chronic cough may also develop sudden weakness of the abdominal wall muscles, leading to a hernia. Around 105,000 people develop an inguinal hernia each year in England and Wales, of which 98% are men.

Symptoms
In many people an inguinal hernia causes no symptoms or only minor discomfort. In others, a frequent complaint is of a heavy dragging sensation in the groin and a painful lump, which might be difficult to reduce. A hernia may prevent people working or from undertaking normal leisure activities. If part of the intestine becomes trapped in the hernia, then this may become an emergency situation i.e. a strangulated hernia. This needs urgent hospital treatment. Most of the time, routine surgery is recommended to prevent this problem occurring.

Outpatient clinic and investigations
In most cases, diagnosis of an inguinal hernia is very straightforward and no special tests are needed. Sometimes if the hernia is very small or difficult to feel, an ultrasound scan of the groin are might be arranged.

Treatment
If you are very unfit and the hernia is not causing any symptoms, you might be advised that surgery would not be the best option. In this situation, a truss can be prescribed by your GP. This keeps the hernia in place and may alleviate discomfort. However surgery is normally recommended for most people. There are two main methods of treating inguinal hernias, open mesh repair and laparoscopic (‘keyhole’) repair (of which there are two different techniques).

Current guidelines in the UK from the National Institute of Health and Clinical Excellence (2004) (www.nice.org.uk/TA83) state that all three of these methods are acceptable for treating inguinal hernias. Each technique has specific risks and benefits. This leaflet explains open mesh repair which is the technique I favour for most hernias.

Before your operation

If your operation is planned as a Day Case, you will be able to go home later the same day. If your operation is scheduled for early evening, then you would go home the next morning. You should stop the oral contraceptive pill at least 4 weeks before your operation and use an alternative method of contraception. If you are taking aspirin or warfarin, I will advise you as to when these should be stopped before your operation. On admission, the anaesthetist will explain the general anaesthetic to you. Some patients (e.g. those who are unfit or those who prefer to avoid a general anaesthetic) may be offered their operation under a local anaesthetic. This will be discussed with you if appropriate. The groin area will need to be shaved before surgery. I will see you again before the operation and explain the procedure again to you. You will be given a single injection under the skin (tinzaparin) to minimise the risk of deep vein thrombosis.

The operation

An incision is made in the groin area (see *Diagram 1*). The hernia is separated from surrounding tissues and returned into the abdomen. A mesh is then used to reinforce what is usually fairly weak muscle (see *Diagram 2*). On current evidence this method carries the lowest chance of you getting a recurrent hernia. The incision is closed with an absorbable stitch, which does not need removing. Local anaesthetic will be injected into the wound to reduce post-operative pain.

After your operation

You will be prescribed moderate strength painkillers to go home with, although the pain is sometimes not bad enough to need much more than paracetamol. You should avoid driving for at least 2 weeks after the operation or until you feel that you are safe to do an emergency stop (try stamping your foot on the ground after 2 weeks: if it doesn't hurt, you are safe to drive). Day-to-day lifting can be carried out as soon as you feel comfortable but heavy lifting should be avoided for at least 4 weeks. You will be advised as to how long you should take off work.

Risks of the operation

There may be significant bruising and swelling in the groin or scrotum after the operation. This is fairly common (1 in 10 chance) and usually resolves over a few weeks: sometimes an additional operation is necessary to deal with any bleeding. The skin over the incision may also feel quite numb due to bruising of the nerves around the hernia. This could be permanent. Some patients may have quite severe persistent pain in the groin after the procedure due to scarring around these nerves. In some cases this would need referral to a chronic pain clinic for an injection to block the nerves. Wound infections can sometimes occur (around a 3 in 100 chance) and may need your GP to start you on a course of antibiotics. As mentioned above, any operation carries a risk of thrombosis (clots in the leg, sometimes leading to clots in the lung). The risk can be reduced by tinzaparin injections, using a mechanical device to squeeze your calf muscles when you are asleep and getting you mobile as quickly as possible after the operation. Mesh repair carries a low risk of developing a recurrent hernia (around 1 in 100 chance).

Follow-up

You will normally be seen in the outpatient clinic at 6 weeks. By about 4 weeks all bruising should have gone, although you may be left with a firm area over the scar that may take several months to disappear completely. Any problems can usually be resolved with your GP. You can also contact the ward or my secretary if you need any further advice.

Further information

Further information on inguinal hernia may be obtained from NHS Choices - http://www.nhs.uk/Conditions/Inguinalherniarepair/Pages/Treatment.aspx

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