

# **SPECIFIC COMPLICATIONS TO ACL SURGERY**

## **EXCESSIVE SWELLING AND BRUISING OF THE LEG**

This is due to bleeding in the joint and surrounding tissues. It can cause short term pain and make it difficult to bend the knee. To avoid this, ice the leg and elevate it as much as possible.

## **INFECTION**

This occurs in approximately 1 in 200 cases. The procedure is done using antibiotic prophylaxis and in a sterile operating environment to reduce the risk of infection. Treatment involves either oral or intravenous antibiotics and may involve further operations to washout the joint. Occasionally this can lead to joint stiffness, destruction of the cartilage within the joint or failure of the graft.

## **JOINT STIFFNESS**

Can result from scar tissue within the joint, resulting in loss of motion. Modern minimally invasive techniques and rapid rehabilitation makes this less likely than in the past. Treatment consists of physiotherapy or occasionally further surgical procedures. Full range of motion cannot always be guaranteed.

## **BLEEDING**

Small amounts of bleeding in the joint are normal. Large amounts of bleeding can occur but are more common in patients with bleeding disorders or those taking anti-inflammatory medications. These should be ceased 2 weeks prior to surgery. Excessive bleeding may require aspiration of the knee or occasionally a repeat arthroscopy.

## **GRAFT RUPTURE OR STRETCHING**

This can occur with future injuries. Graft failure is approximately 5-10%, which is about the same risk as rupturing the good cruciate ligament on the other side. If this occurs, the graft can be revised using the tendons from the other leg. The post-operative course for a revision is only slightly slower than normal and the complications much the same.

The graft can sometimes stretch over time. This is more likely in patients with ligamentous laxity or in patients with damage to secondary stabilisers of the knee (i.e. the other strong ligaments around the knee).

## **DAMAGE TO NERVES OR VESSELS**

There are small nerves under the skin which cannot be avoided and cutting them can lead to areas of numbness in the skin below the knee. This is normal. There can also be areas of tingling or hypersensitivity around the scars. Any numbness generally reduces in size with time and doesn't cause any functional disability. Damage to motor nerves that control power is extremely rare.

## **HARDWARE PROBLEMS**

The graft is fixed into place with various devices into the bone. These vary from metal or absorbable posts, screws, buttons and staples. These devices can occasionally cause irritation

to surrounding structures and require removal. They are only removed once the tendon is grown into the bone and they are no longer required to hold the graft in place.

### DONOR SITE PROBLEMS

The choices of graft include hamstrings and middle third patella tendon. Following hamstring harvest you can get some pain and swelling in the region of the hamstrings at the back of the thigh but this is usually temporary. It is very rare to have any long-term hamstring pain. Weakness in the hamstrings if it occurs is usually minimal.

The biggest problem following middle third patella tendon harvest is anterior knee pain which can cause discomfort with everyday activities but especially kneeling. Occasionally the hamstring tendons are not satisfactory and either the hamstrings of the opposite leg or the patella tendon needs to be taken. This is an intraoperative decision.

### ANTERIOR KNEE PAIN

Some patients develop pain around the kneecap. This is a result of muscle wasting and inactivity following surgery and usually resolves over time with appropriate physiotherapy.

### REFLEX SYMPATHETIC DYSTROPHY

This is a rare condition, the mechanism of which is not fully understood. It involves an overactivity of the nerves in the leg causing unexplained and excessive pain.

### DEEP VENOUS THROMBOSIS

Clots in the leg which may require medical management in the form of injections or tablets to thin the blood. Very rarely these can travel to the lungs (pulmonary embolus) causing respiratory difficulties or even death.

### COMPARTMENT SYNDROME

An extremely rare condition which is due to excessive swelling in the knee, cutting off the circulation to the muscles. This requires a fasciotomy operation to relieve this pressure.

### ONGOING PAIN

This can be unpredictable but is more common in knees with damage to other structures such as menisci or articular cartilage. Arthroscopy cannot reverse any damage to the articular surface (arthritis). If unexplained pain does occur, then another arthroscopy may occasionally be recommended.

### SCAR

Could result in unsightly scarring or wound breakdown.

## **ANAESTHETIC COMPLICATIONS**

Modern anaesthetics are extremely safe. Anaesthetists use technologically advanced equipment with sophisticated monitoring devices. Modern anaesthetic drugs also have fewer side effects and higher margins of safety.

Despite this, every anaesthetic carries a risk. Fortunately, major ones are rare.

You will see your anaesthetist prior to your surgery who will discuss your anaesthetic with you. This is your opportunity to discuss any concerns you may have. Any previous anaesthetic history is helpful for your anaesthetist. It is important to bring with you a list of medications and any test results you may have had (e.g. blood tests, cardiographs).

Anaesthetics are either general or local. General means you are put to sleep and local means a needle is given to anaesthetise (numb) the area for surgery. This may be a needle around the operative site, in nearby nerves, or a needle in the back (spinal or epidural).

### **GENERAL ANAESTHETIC**

Minor complications of general anaesthetic include:

- Headache
- nausea/vomiting
- pain or infection at drip sites
- sore throat
- bleeding from the tube
- chipped teeth.

Major complications include:

- heart attacks
- Stroke
- Kidney failure
- Death (very rarely).

The risk of these complications is increased in patients who have underlying medical problems and in those having more major surgery.

There is a risk of allergies to medications and it is important to notify all medical personnel of any known allergies.

If you have a blood transfusion, there is a risk of a reaction to it as well as an extremely small risk of infectious diseases such as hepatitis or AIDS.

### **LOCAL BLOCKS, EPIDURALS OR SPINALS**

Risks specific to local nerve blocks or spinal anaesthetics (needle in the back) include:

- Local nerve damage, which can cause ongoing irritation
- Spinal cord damage due to haematoma (bleeding) or infection. This is an extremely rare complication but can lead to paralysis or even death.

Your anaesthetist will make every effort to make you as comfortable as possible during your anaesthetic and will be more than happy to answer any questions for you. He or she will explain the risks of the anaesthetic to you.