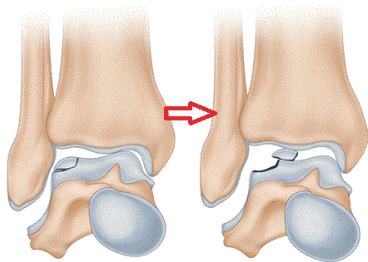


## Ankle Arthroscopy

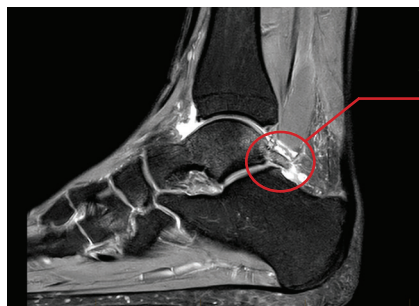
Ankle arthroscopy is a minimally invasive method of treating pathology within the ankle joint. It is 'key-hole' surgery.

The operation is performed under a general anaesthetic, which is supplemented with a local anaesthetic block. It is usually carried out as a day surgery procedure. Two small incisions are made around either the front or the back of the ankle joint, depending on the location of the problem. The joint is then filled with fluid to distend it and to allow the safe passage of surgical instruments. An arthroscope, which is a small telescope connected to a camera, is inserted into the joint. The joint is then inspected under direct vision and the pathology is treated appropriately.

There are several different problems that can be treated with an ankle arthroscopy. These include osteochondral injuries and impingement.



*Osteochondral injury of talus*



*Os Trigonum causing posterior impingement*

*Posterior impingement*

### Osteochondral injury

An osteochondral injury refers to injury to the cartilage, which is the lining of the ankle joint. Although it may sometimes occur spontaneously, it is usually a result of trauma to the ankle joint. The most common cause of this is a severe ankle sprain. A piece of cartilage may become loose or detached, leading to pain and swelling. 'Clicking' and a sensation of something 'catching' in the joint may also occur.

During the arthroscopy, loose fragments of cartilage can be removed. Microfracture can then be performed to the underlying bone, which is now exposed. Microfracture involves drilling holes in the bone, which causes bleeding into the defect. This blood contains stem cells and subsequently forms a clot. Over a period of months, the clot then consolidates and transforms into new cartilage.

### Impingement

Impingement is pain that occurs at the end of ankle range of motion. This may be at the end of dorsiflexion (ankle moving up, toes toward the ceiling) or at the end of plantarflexion (ankle moving down, toes toward the floor). Pain may be experienced at the front or at the back of the joint respectively. Movement also becomes restricted. This is caused by extra bone or soft tissue at the front or at the back of the joint. Osteophytes (bone spurs), os trigonum (an accessory bone at the back of the ankle) or arthrofibrosis (scar tissue) are some common causes of impingement.

Using an arthroscope and the appropriate instruments, such as motorized burrs and shavers, bony and soft tissue impingement can be effectively treated.

### Post-operative rehabilitation

A boot is usually applied at the end of the operation. If the arthroscopy was for impingement, then it is usually discontinued after a few days to facilitate physiotherapy and aggressive range of motion exercises. If an osteochondral injury was treated, then the boot stays on for 4-6 weeks. In this instance, weight bearing may also need to be protected using crutches, for 4-6 weeks.

Although the operation is reliable and performed with the utmost care, complications can occur. These are very rare but include numbness, infection, bleeding and blood clots. The ankle is monitored regularly by Dr Lau for weeks after surgery to identify early and treat any possible complications early.