

KNEE PLICA SYNDROME

INTRODUCTION

Plicae are some of the normal structures of the knee joint cavity. They are folds of the capsule of the joint that surround the patella (kneecap). The plicae are variable in structure between individuals. There are at least 4 in most knees.

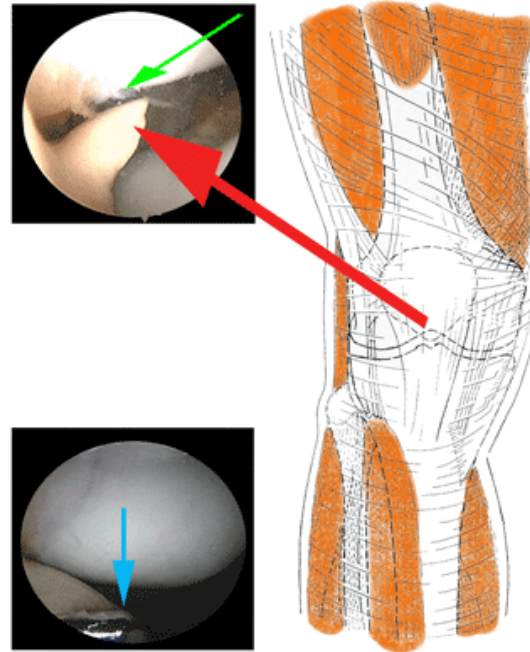


The least common is the lateral patella plica. The most common is the medial patella plica. The medial and lateral patella plicae are load sharing for the patella and trochlea (kneecap and thigh bone) in much the same way as the menisci (cartilages) are for the tibio-femoral joint (thigh bone and shin bone). The suprapatella and infrapatella plicae are not without clinical relevance and are more common in children compared with adults indicating that a change occurs with time and growth. Each may be of many various morphological types.

HOW DO I KNOW IF I HAVE A PLICA?

Most plicae do not cause symptoms.

There may or may not be a history of injury to the knee (Dupont JY. *Synovial plicae of the knee. Clin Sports Med. 1997;16(1):87-122*). Depending on which plica is involved in impingement it will cause symptoms such as pain, crepitus (grates on movement), snapping, and occasionally locking. If there is already wear and tear of the cartilage surface of the joint then there might be an effusion (fluid).



Medial plica (red arrow) causing grade 1 chondromalacia (green arrow). Small shaver used to remove it (blue arrow).

The suprapatella plica can cause pain above the patella. If it causes tethering of the patella or traps some of the synovial lining of the joint above the patella it causes pain after prolonged activity such as cycling or running.

The medial plica causes pain after activity around the inside of the patella. It is often worse after exercise and when painful it is worse going up and down stairs or rising from a chair. If it is only a fragment of the plica that is being trapped occasionally under the patella then symptoms are intermittent and sharp at

first then as the fragment causes wear of the smooth cartilage of the surface of the patella or trochlea symptoms of pain become continuous, worse going down stairs and last longer after activity. As the plica causes wear of the hyaline cartilage then the lining of the joint (synovium) becomes inflamed and produces fluid (effusion). The lateral patella plica causes similar symptoms on the outside edge of the patella.

The infrapatella plica can cause symptoms if it becomes torn in minor trauma. The pain is usually localized at the inferior pole of the patella is intermittent at first.

WHO DO I SEE IF I THINK I HAVE A PLICA?

If your symptoms have been going on for more than 6 weeks, ask your physiotherapist or doctor to send you to a Consultant in Orthopaedic and Trauma Surgery. The Consultant will ask about the common symptoms. Clinical examination is extremely helpful if the snapping plica is palpated along one edge of the patella and this reproduces your symptoms.

Your surgeon may recommend a number of investigations like an X-ray, MRI scan or MRI arthrogram.

IS PLICA THE SAME IN EVERYONE?

No. The treatment offered should depend on the diagnosis that has been confirmed. Prognosis depends on how much wear and tear the plica has caused:

1. Normal MRI
2. MRI showing oedema of the plica or Hoffa's fat pad and Grade 0 chondromalacia (no cartilage surface damage)
3. Grade 1 chondromalacia (slight cartilage surface damage)
4. Grades 2-3 chondromalacia (cartilage surface damage)
5. Grade 4 chondromalacia (loss of cartilage)

AM I GOING TO GET BETTER?

The outlook (prognosis) depends on the stage of damage to the articular cartilage of the patellofemoral joint (chondromalacia). It is good in most cases.

WHAT ABOUT TREATMENT?

If the Consultant Orthopaedic Surgeon suspects clinically or MRI confirms that you have this condition you will be offered non-steroidal anti-inflammatory drugs, physiotherapy, or occasionally local injection of cortisone. A good physiotherapist will try a course of patella taping and if indicated (Patellofemoral Braces). Surgical treatment is indicated if conservative therapy fails or your condition has progressed beyond grade 1 chondromalacia. This is minor keyhole surgery (arthroscopy). Arthroscopic resection of the plica that is impinging in the joint cures the symptoms within 2 weeks for patients without cartilage damage. Persistent symptoms 6 weeks after surgery are due to over excision of the plica and adhesion formation, misdiagnosis, or persistent symptoms from the cartilage lesion (grade 2-4).

WHAT ARE THE RISKS OF SURGERY?

Take a painkiller such as paracetamol and an anti-inflammatory painkiller such as ibuprofen, which will reduce both pain and reduce swelling after surgery. For the first 72 hrs RICE (Rest, Ice, Compression, Elevation). Always follow the instructions supplied with this medication first or ask your pharmacist for advice if you have any other conditions or if you are taking any other medication. As with any operation there is a risk of infection of the skin (National Average 5-7%). If your wound gets red, hot, swollen and tender; see your doctor, have the sutures removed early and go on antibiotics. There is a small risk of thrombosis. Ask your surgeon for advice to prevent this. There is a small risk of a hemarthrosis and later adhesions. Ask your surgeon about how he is going to prevent this.

WHAT ARE THE BENEFITS?

The relief of pain and prevention of progression of osteoarthritis is the main benefit ([O'Dwyer KJ and Peace PK. Injury. The plica syndrome 1988;19\(5\):350-2](#)). For patients with established degenerate change the surgery might slow the progression of degenerate change.



Plica
Syndrome

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