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Information leaflet: GANGLION AND MUCUS CYST

What is it?

Ganglions represent more than half of the soft tissue swellings in the hand and wrist.

Is it called by any other name?

When it arises on the back of the finger over its end joint it is referred to a mucus (myxoid) cyst.

What is the cause?

Our body has a lubricant in its joints or in the tunnels through which tendons pass. This lubricant is called the synovial fluid. Usually due to an unknown cause or sometimes due to an injury or arthritis, this lubricant leaks. This lubricant has special proteins that make it thick and the body is unable to absorb it. It so forms a ganglion which is like a balloon filled with thick fluid (*see middle picture below*).

What are the symptoms and how is the condition diagnosed?

The diagnosis is usually clinically obvious to the Hand Specialist. The lump is smooth and round. However, other causes of firm to solid swellings should be ruled out. The symptoms depend on the site and size of the ganglion. The usual complaint is of a swelling that becomes noticeable under the skin. Their behavior of the swelling is unpredictable and may cause discomfort or pain.

While ganglions can occur anywhere the most common sites for these lumps to arise are:

1. The middle of the back of the wrist (*see picture below*): Ganglia on the back of the wrist can be uncomfortable when the wrist is bent backwards. They usually come from the wrist joint and are more common in young women. The swelling can vary in size and be unsightly. When they occur in older people they may be related to arthritis within the wrist joint.
2. The front of the wrist at the base of the thumb: Ganglia on the front of the wrist, at the base of the thumb occur in the middle aged. They are related to wear and tear of the joint at the base of the thumb. They can be associated with an ache or pain.
3. The front of the base of the finger: These pea sized lumps form within the sheath of a tendon that bends the finger; they can rarely be seen. They can be painful on gripping and can cause locking of the affected finger.
4. The back of the finger over its end joint (mucus/myxoid cyst): They can cause pressure over the nail and lead to a furrow in the nail (*see picture on the right below*). They can repeatedly rupture and the jelly like cyst fluid will leak through the overlying skin. This may lead to infection.



Will further tests or investigations be needed?

Sometimes further investigations such as x-rays or MR imaging may be advised. This is usually because the ganglion is at an unusual site or associated with ligament injury and arthritis.

What is the treatment?

1. Treatment depends on the location of the swelling and extent of the symptoms. It is worthwhile waiting to see if the cyst disappears. If it continues to be troublesome the cyst can be aspirated with a needle and a steroid injected at the same time. This treatment is likely to work for ganglia which come from the tendon sheath.
2. If needle aspiration fails the swelling can be formally excised. This can usually be carried out under local anaesthesia. Sometimes general anaesthesia or regional anaesthesia may be needed.
3. When the ganglion over the end joint of the finger is excised it is necessary to excise the bony spurs (osteophytes) that have formed due to the underlying arthritis in the end joint.

What happens if it is not treated?

Ganglion cysts are benign and can safely be left alone. A significant number will either disappear spontaneously or cause little trouble.

What is the success of surgical treatment?

Aspiration of the ganglion has a high recurrence rate (50%). Recurrence after excision of the wrist ganglion is about 10-20%. Pain from underlying arthritis may persist.

What are the complications of surgical treatment?

1. There is a small possibility that the scar may remain unsightly or be painful.
2. Infection of the wound is possible but it can usually be successfully treated with antibiotics.
3. Stiffness of the wrist and finger joints is possible and hence it is very important that the fingers are exercised regularly.



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4. Severe complex regional pain syndrome (CRPS) is a rare but serious complication after hand surgery. Unfortunately it is not possible to predict this problem but needs to be watched and treated (usually with physiotherapy).
5. Any surgical intervention has the risk of developing complications that are unpredicted. These complications may have the potential to leave the patient worse than before surgery.

Is there anything I can do to improve outcome?

After surgery keep the hand up so as to help reduce swelling. I would advise against wearing rings on the operated hand for 4-6 weeks. Start exercising your fingers immediately after surgery (Make a fist, and then stretch your fingers out; bend your wrist forwards and backwards and touch each finger tip in turn with your thumb). This will help avoid finger swelling and stiffness. Keep the wound dry. Once the wound has healed the scar can be massaged regularly with a soft non-perfumed cream for 6-8 weeks.

When can I do various activities?

Generally patients can return to a desk job within a few days and perform reasonable tasks with the hand. Manual work should be avoided for a few weeks. Driving should be possible within a few days after the operation as long you are comfortable and have full finger movements.