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Ganglions of the hand & wrist

Patient information

Ganglions are harmless collections of fluid, also called cysts, and are common causes of lumps in the hand & wrist. Often, these lumps may change size over time, either growing steadily, or fluctuating in size.

What causes ganglions?

Ganglions are collections of fluid. They are formed by injury or damage to a nearby structure, such as a joint, tendon or ligament. A simple way to think about ganglions is that the body responds to injury or damage by causing localised swelling of fluid. This fluid forms a collection called a ganglion. As it gets bigger, the ganglion can be seen from the surface of the skin as a lump.

The ganglion itself is like a balloon filled with fluid, with the neck of the balloon coming from the underlying area of injury. The ganglion itself is not harmful. However, the ganglion itself, or the underlying cause of the ganglion, may be painful.

Sometimes, the underlying damage is a chronic degenerative condition. A minor injury may bring attention to the lump which had previously not been noticed. In these cases, the recent injury may not have been the actual cause of the ganglion.

Where are ganglions usually found?

There are four main areas where ganglions are usually found:

1. *Dorsal wrist.* This is the back of the wrist. This ganglion usually comes from the wrist joint or ligaments.
2. *Volar wrist.* This is the front of the wrist. This ganglion usually comes from the wrist joint or ligaments, or from a nearby tendon.
3. Near the base of the fingernails. This is called a *mucous cyst*. This ganglion comes from an arthritic finger joint (the *distal interphalangeal joint*). In fact, the fluid in the ganglion is the joint fluid itself.
4. Palm of the hand. This is a *tendon sheath ganglion*. The ganglion arises from the sheath surrounding the tendon that flexes the finger.

What tests are required?

Usually, an X-ray is required to look for any nearby arthritis. An ultrasound or MRI will give more information about the ganglion and the surrounding soft tissue.

How are ganglions treated?

A ganglion is not harmful, so no treatment is necessary if it is not troubling you. Some will eventually go away by themselves. However, if the lump bothers you, gets in the way or is associated with pain, then treatment may be necessary.

Non-surgical treatment

Wrist and palm ganglions can be treated by aspiration (drawing the fluid out with a needle), and injection of steroid to help alleviate the pain. However, more than 50% of ganglions will reappear with this treatment.

Should I burst these myself?

No. Placing a needle into a ganglion carries a risk of infection and should be done under as sterile condition as possible. Avoid the temptation especially to burst a mucous cyst ganglion near the fingernail, even though it may only lie under a very thin layer of skin. Bursting this means that

bacteria on the skin can infect the underlying joint directly. Once this happens, a joint infection requires prolonged antibiotics and surgical washout procedures.

Surgical treatment

If there is significant pain, or the ganglion does not go away with aspiration, then surgical removal is recommended. If the ganglion is pushing on a nerve and causing symptoms, surgery is also recommended.

Surgery is aimed at removing the ganglion fluid along with its surrounding capsule. The stalk of the ganglion is also removed, and the underlying condition debrided (cleaned up) and perhaps repaired.

Surgery is done as a day-only procedure in a hospital. It can be performed under general anaesthesia with the patient asleep, or regional anaesthesia where the surgical site is numbed but the patient is awake.

What to expect after the operation

A bulky dressing will be applied to the surgical site in the operating room at the end of the operation. This should be kept dry and elevated until you see me for follow-up in about 7-10 days.

At the follow-up appointment, I will check the surgical wound and remove any stitches that need to be removing. If you are particularly stiff, I will refer you to a hand therapist to help with regaining movement and strength.

Depending on the ganglion and the underlying condition, it may take 6-12 weeks to return to full activities.

What are the risks of surgery?

Complications from ganglion surgery are uncommon. The usual risks are:

- Bleeding.
- Infection.
- Nerve, tendon or blood vessel damage.
- Stiffness.
- Ganglion recurrence is about 15%.

- Ongoing pain. This may be from the deeper structures or from a small nerve in the skin at the incision site.
- Mucous cyst excision may cause nail deformity or ridging due to the closeness of the cells that grow the nail.
- Mucous cysts indicate an underlying arthritic joint. The arthritis will progress with time and may eventually become symptomatic.
- Complex regional pain syndrome.