

GANGLION

Introduction

A ganglion is a fairly common disorder of the wrist, hand, foot and ankle. It most often affects the back of the wrist, sometimes the front, and often other areas. In the condition a discomfort often appears before the swelling. This may be of minor irritation only. Slowly a swelling (sometimes called a cyst) appears at the wrist.

This problem at the wrist is caused by degenerate change in



the joint capsule of two bones in the wrist called the scaphoid and lunate bones. The joint capsule is the tissue that contains the articulating joint surfaces. The cause of the degenerate

change is not known. Often there is more than one ganglion on the capsule at any one time but only one has grown.

What is a Ganglion?

Although the exact cause is unknown, it occurs most often in young (average age 30 years) white women. The disease usually presents with pain, weakness and a swelling. The condition does not progress to arthritis. There may be coincidental osteoarthritis symptoms from other joints around the wrist and hand. A significant proportion (25%) of patients has weakness even after removal of the ganglion with conservative or surgical techniques. Ganglia are three times more common in women than men (3:1).

The ganglion may rapidly increase in size especially after activity. However, it more commonly progresses slowly over a period of years. It is a benign condition that occasionally resolves on its own. A ganglion is filled with a clear gelatinous fluid. This is in distinction to for example a Baker's cyst or a parameniscal cyst of the knee which is filled with straw coloured synovial fluid. The only absolute indication for surgery is when a ganglion causes nerve injury. I have seen this in spontaneous foot drop due to a ganglion in two patients. One was a golfer (see right with weakness of ankle dorsiflexion) and the other a hockey player. Careful excision of the cyst was followed by full recovery.



How is it Diagnosed?

The diagnosis is made on history and examination. In the history the patients is asked about the details described above and other medical details that might affect the treatment offered. The

examination should include an examination of the hands as well as a general examination if surgery is being considered. The surgeon should have mentioned the implications of a volar ganglion that has appeared near the radial artery.

How is it Treated?

The Condition is treated both conservatively and with surgery.

It is my opinion, and that of most colleagues, that surgery should be delayed until the patient has tried conservative treatments which can be as successful at preventing recurrence as surgery.

The traditional rural GP's method of hitting the swelling with a heavy family bible has largely been superseded with a simple technique of aspiration. This has a 30% success rate and the 70% of patients that return have a second or third successful aspiration.

Another technique is aspiration and the instillation of a small amount of steroid. This has approximately a 30% success rate at 6 months compared with a 70% success rate following surgical excision. The use of steroid carries its own risks. There is often a period of increased pain called the flair up period. This usually lasts only 24 hours and can be managed with simple analgesia. If steroid leaks from the ganglion then lipoatrophy or depigmentation can occur. For this reason many surgeons will only suggest the addition of cortisone in the larger ganglia.

Operative Treatment

No hard and fast rule exists as to when surgery is needed. Patients who have tried conservative management feel that the ganglion is unsightly and want removal for cosmetic reasons. Excision is occasionally recommended to biopsy the swelling when the patient has been reluctant to undergo aspiration.

Open or arthroscopic surgery can be used for this procedure. Arthroscopic surgery is associated with a high risk of persistent pain following removal of the ganglion. For this reason open excision and inspection of the scapho-lunate joint capsule through a small incision is preferred.

Surgery is usually performed under general anaesthesia with a tourniquet to allow exploration to the origin of the ganglion in a bloodless field.

Benefits and Risks of Surgery

The benefit is to remove the ganglion and daughter cysts from the capsule of the joint it has arisen from. You can drive once you feel this is safe to do. Returning to work depends on your occupation. Many non manual self employed patients return to work within the week. The wound will be reviewed and if non-dissolving sutures have been used these will be removed with the minimum of discomfort.

The risks include bleeding and formation of a clot under the skin. This often settles with elevation and rarely requires further surgery to release the clot. Infection occurs in an average 6% of patients because we all have bacteria on our skin and if these bacteria get into the cut they can multiply to produce infection. Infection can be surmised if you develop more severe

Ganglion

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pain after the first 24 hours. In these circumstances please contact your GP immediately for early suture removal and antibiotic therapy. Scar pain (RSD) is uncommon and early scar pain can be treated by massaging the area firmly with moisturiser once the scar has healed. Very rarely, nerve damage occurs and the patient reports an area of numbness in the wrist. This tends to occur in 1 in 100 patients with first time surgery rising to 1 in 20 for recurrent surgery. If the nerve is going to recover nerves recover at a rate of an inch per month. Finally the condition can recur. Up to 10% of ganglions can recur after surgical excision.

After Surgery



Immediately after surgery your wrist will be bandaged and will be kept elevated to keep the swelling down. You should maintain the elevation after you are taken home for 72 hours. Before you go home the physiotherapist will reduce your dressing and instruct you on exercises.

The management after surgery is as important as the surgery. You may be given pain relief medications. It is important to keep the dressing dry so cover it with a plastic bag when bathing or showering. Dark blue or brown discoloration of the hand and wrist after surgery is normal due to bruising. You will be told about exercising your hand by opening and closing your fingers and squeezing exercises.

After the wounds have healed it is often useful to get a sponge ball from a toy department and try to make your thumb meet each finger, one by one, through the sponge ball using a pinching motion. Begin with five repetitions with each finger, and build up to twenty. Then squeeze the ball as firmly as possible, and while holding the squeeze tightly, slowly bend the wrist up and down as if waving goodbye.

Physiotherapy Summary

Postoperatively, the wrist will be lightly bandaged only (depending on the Surgeon), which remains for one week. 72 hours of elevation is mandatory.

Contact your General Practitioner

If you develop a pale blue or white hand, increasing pain for more than a day not relieved by medication, loss of sensation, throbbing, excessive swelling in the hand, or fever over 100 ° F.