

## Ganglion Cyst of the Wrist and Hand

### What is it?

Ganglion cysts are the most common mass or lump within the hand. They are not cancerous and are usually harmless in most cases. They most frequently develop on the back of the wrist; however, they appear at multiple sites over the hand. These fluid-filled cysts can change in size, becoming larger or smaller and may spontaneously disappear completely. Many cysts do not require treatment, however if the cyst is painful, interferes with function or limits the ability to use the hand then there are treatment options available. A ganglion rises out of the joint like a balloon on a stalk. It usually arises from a joint and the swelling often communicates with the joint via a long stalk. They are frequently fluid-filled, and this can be demonstrated with an ultrasound scan. They are most common around the wrist but can occur on the end joint of the fingers and at the base of the fingers. It is not known what exactly causes the formation of a ganglion, but they are most common in younger patients between the age of 15 and 40 years. They are also more common in women but can appear at any age and in either gender.

### What are the symptoms?

Most ganglions form a visible lump. This may be easily palpable and will often change in size. Some people think that ganglions are a normal variation, and they frequently cause no symptoms, however if a ganglion puts pressure on the nerves that pass through the joint it can cause pain and discomfort. If the ganglion reaches a large size (although not painful) it can cause concerns about appearance.

### Clinical examination

Most frequently the diagnosis is made by clinical examination, however x-rays may show an underlying bony problem. X-rays do not show ganglions well and an ultrasound scan or MRI scan will visualise soft tissues like a ganglion more clearly. These tests may be ordered if operative treatment is planned.

### What investigations are required?

An ultrasound scan or MRI scan may be required to visualise the ganglion more clearly.

### What are the treatment options?

There are two main options for the treatment of ganglions. These are:

#### Non-operative Treatment

Ganglions can be treated with observation only, as many ganglions will resolve on their own. Immobilisation with a splint or cast is also possible, as increased levels of activity can exacerbate symptoms from a ganglion. This may also allow the ganglion to decrease in size. Aspiration of the ganglion can be performed under ultrasound-guidance, and this can remove the fluid from the ganglion, however this does not alleviate the root or stalk communication to the joint of tendon sheath and will frequently recur after this treatment. However, aspiration under ultrasound-guidance is sometimes recommended in patients who want to avoid surgery.

## Operative Treatment

Surgical treatment is usually reserved for large or painful ganglions and frequently after treatment with aspiration. Surgery involves removing the cyst and the involved stalk down to the joint capsule (or tendon sheath). There is a small chance that the ganglion may recur after surgery, but this is more common with ganglions on the palm side of the wrist than on the back side of the wrist.

## Possible complications

Overall, greater than 95% of patients are happy with the results of the surgery, however complications do occur sometimes.

Some complications specifically related to hand surgery include infection (less than 1% chance), neuroma (less than 1% chance) which is a damaged nerve that becomes painful on reattempts to regenerate, numbness, chronic regional pain syndrome or reflex sympathetic dystrophy (1-2% chance) which is a reaction to surgery which can cause painful or stiff hands.

Complications specific to ganglion removal surgery include recurrence of the ganglion.

DR FRASER TAYLOR