

## Ganglions and Mucous Cysts

### Summary

Ganglions are a benign outpouching of the joint lining or tendon sheath. A mucous cyst is a ganglion at the distal finger or thumb, adjacent to the nail. Ganglions can be painful. They can become infected if they rupture. Observation is a reasonable option if they are not painful or causing a functional problem.

### Definition

**Ganglions are benign fluid filled swellings.** They are associated with joints and tendons. A **mucous cyst is a ganglion at the distal interphalangeal (DIP) joint** of the finger or thumb, adjacent to the nail. A retinacular cyst is a ganglion arising from the sheath of a flexor tendon.

### Causes

**Ganglions are an outpouching of the synovial lining of the joint or flexor sheath. A one-way valve allows fluid out** of the joint but not back in. **Another theory** is that surrounding **tissue undergoes degeneration or produces mucin**, the fluid within the cyst. **Ganglions adjacent to joints are commonly associated with underlying osteoarthritis.**

### Risk Factors

60% of swellings in the hand and wrist are ganglions. Age is a risk factor and women are 3x more likely to develop one.

### Symptoms

Symptoms include:

- A round or ovoid swelling adjacent to a tendon or joint;
- It may fluctuate in size as the fluid inside increases and decreases;
- It can be painful but this can be related to the underlying osteoarthritis or localised pressure;
- If it ruptures through the skin, clear fluid will escape;
- If opened they can become infected;
- Mucous cysts can cause a groove or deformity in the nail.

## Diagnosis

**Ganglions are commonly diagnosed clinically, especially mucous cysts.** An x-ray should be performed for ganglions near joints because of the potential association with osteoarthritis. Deeper swellings may need an ultrasound to prove it is fluid filled rather than a solid tumour, particularly if you choose not to have surgery.

## Treatment

**Observation is a reasonable option in ganglions**, particularly if they are not painful or causing a functional problem. **Spontaneous resolution does occur**, but can take months or years.

### Mucous Cysts:

- **Puncturing and cortisone injection is not recommended** as the recurrence rate is high and they **can become infected**.
- Infection in a mucous cyst may respond to oral antibiotics but they can lead to septic arthritis and require hospitalisation and an urgent operation.
- **If a mucous cyst ruptures more than once, or becomes infected, surgery is indicated to prevent infection in the future.**
- Debriding joint synovitis and osteophytes improves recurrence rates from 10% to <5%.
- Complications include ongoing pain and deformity from the arthritis, delayed healing and stiffness.
- A fusion of the DIPJ is the only way to reduce the recurrence rate to near 1%. This is indicated when arthritis is causing intolerable joint pain.

### Retinacular cysts:

- Puncturing with a needle can lead to resolution but it can take more than one attempt. They can be small and difficult.
- Surgical excision leads to resolution in almost 100% of cases with a very low complication rate.

## Prevention

A healthy lifestyle is the best way to prevent arthritis including a balanced diet and regular exercise. This will reduce the chances of developing ganglions associated with joints. Nonoperative management will lead to less symptoms from arthritis and associated ganglions. Once a ganglion develops, intervention is the best way to prevent recurrence.

### Written with the help of:

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