North Cheshire and Mersey
NHS Foundation Trust

Morton’s neuroma

Trauma and Orthopaedics

Information for patients and carers

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What is a Morton’s neuroma?

A Morton’s neuroma is the swelling of a small nerve (plantar digital nerve) as it goes under the ligament that connects the metatarsal (toe) bones. The nerve becomes trapped, causing pain.

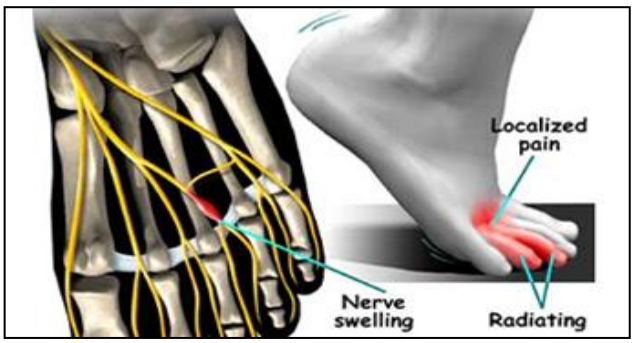

Figure 1: Morton's Neuroma

It often happens between the third and fourth toes.

Causes include irritation, trauma or excessive pressure.

What is the cause?

Morton's neuroma is 8 to 10 times more common in women than men. The exact cause is not known. It is thought to develop after long-term stress and irritation of the nerve.

It is linked to:

- flat feet
- bunions
- hammer toes
- high foot arches
- poorly fitting, high-heeled or tight shoes

What are the symptoms?

Symptoms of Morton's neuroma may start with toe pain or pain in the ball of the foot that spreads into the toes. This usually gets worse when wearing shoes or when standing and walking.

You may also feel burning, tingling and numbness in the toes. Some people compare the pain to the feeling of ‘walking on a pebble or a marble’.

How is the diagnosis made?

Morton's neuroma is usually diagnosed based on your symptoms and an examination of the foot. The healthcare team may gently squeeze the toes together and apply pressure between the toes. This can reproduce the symptoms and cause a swelling or ‘click’, known as the Mulder’s click.

If a Morton's neuroma is suspected, an injection of local anaesthetic into the area can help to temporary reduce the pain, burning and tingling for a short time. This can help to confirm the diagnosis.

If a diagnosis is still not clear, an ultrasound or MRI scan may be needed.

What treatment is available?

Footwear changes: avoid high-heeled and narrow shoes. Shoes with lower heels and a wide, soft sole help the bones to spread out and reduce pressure on the nerve.

Orthoses: special orthotic inserts and pads can lift and separate the bones. This helps to reduce the pressure on the nerve.

Steroid and local anaesthetic injections can be injected to help reduce inflammation and pain. This may cure the problem if your symptoms are recent.

Sclerosant injections of alcohol and local anaesthetic can be used to 'harden' the nerve. This is done under the guidance of an ultrasound scan.

Is surgery an option?

If nonsurgical measures do not work, surgery is sometimes needed. This involves a small incision (cut) on the top of the foot, between the affected toes, to remove the swollen nerve or create more space around the nerve (decompression). Nerve resection will lead to permanent numbness of the skin between the affected toes. This does not usually cause any problems.

What happens after surgery?

After the surgery, your foot will be in a bandage for 2 weeks so the wound can heal. You will need to wear a hard-soled surgical shoe. Once the wound has healed, you can wear comfortable shoes.

What are the risks of surgery?

Surgery is usually successful, and complications are rare. Possible risks include:

- wound infection
- swelling
- ongoing pain
- recurrence of symptoms
- formation of a 'stump neuroma', where the cut ends of the nerve regrow to form another swelling

This may need an injection between the toes or another operation. Revision surgery is usually done through a second cut on the sole of the foot.

What is the prognosis?

About half of the people with Morton's neuroma don’t need any surgery. Their symptoms are managed with footwear changes and injections. Of those who choose to have surgery, about 3 out of 4 have good results with relief of symptoms.

Can a Morton’s neuroma be prevented?

Wearing shoes that are well-fitted, low-heeled and with a wide toe box may help to prevent Morton's neuroma.

Further information

Please let staff know of any concerns or questions you may have. We will do our best to answer your queries quickly.