

FEELING DOWN AT HEEL?...READ ON!

Foot pain is very common in arachnoiditis patients. The majority report burning in the feet and often a sensation of walking on broken glass.

Of course, the best person to consult about this is a podiatrist or chiropodist as they are expert in assessing and treating foot problems.

Burning pain, if it is neuropathic in origin, may be best treated using drugs such as antidepressants and anticonvulsants.

Below are a few relevant foot conditions which might be worth knowing about.

PLANTAR NEUROMA

In Aldrete's study (1) 6.7% of respondents had plantar neuroma. He attributed this finding to repetitive irritation of the metatarsal nerves due to abnormal gait and foot posture in arachnoiditis patients.

In fact, plantar neuroma (also known as Morton's neuroma) is a relatively common peripheral

neuropathy.

Some authors prefer to call it *plantar digital neuritis* (intermetatarsal/interdigital neuritis IDN), a term which describes the condition more accurately as it involves interdigital (between the toes) nerve on the sole of the foot.

It tends to be on one foot, usually between the 3rd and 4th. toes. Women are more often affected than men. Usually the condition presents in the 5

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. decade. (but age range can be 18-60)

The symptoms are: agonising pain in the sole after walking/standing in closed shoes for a variable period of time; relief can only be obtained by stopping, sitting down, removing the footwear and resting and/or massaging the foot.

The pain tends to be well localised: more diffuse pain is likely to be from a different condition.

Typical descriptions are: "like walking on a hot pebble"; "having a hot poker thrust between the toes."

Mild forms present with burning pain and occasional numbness or tingling.

Between attacks, the patient may be able to walk without limping.

Alternatively, there may be a lump or a click in the forefoot.

A lump is usually a *neurofibroma*, a benign tumour which can involve the nerve and/or soft tissue around it. It is usually very superficial and of itself painless, but it may put pressure on the nerve.

A North American Health Survey in 1980 looked at nearly 3000 foot problems and found that intermetatarsal neuritis accounted for 37% of reported complaints.

This condition arises because of nonspecific proliferation of connective tissue, resulting in deposits of fibrin adjacent to the nerves, which leads to fibrosis, compression of the nerve and subsequent nerve degeneration.

This is not thought to be an inflammatory condition (cf. Plantar fasciitis*); some authors describe it as an entrapment (compression) neuropathy (see above: cf. Carpal Tunnel Syndrome)

Other similar conditions include: synovitis, bursitis and metatarsalgia. Synovitis affects the small joints in the feet; bursitis can occur in conditions such as rheumatoid arthritis: it tends to present with pain and swelling in the web space between the toes (IDN does not tend to involve swelling).

In metatarsalgia, pain is localised directly under the involved metatarsal (long bones in the foot which connect the toes to the tarsal joints below the ankle) Note, however, that there may be a bursa as well as the neuroma.

Other conditions which must be excluded are: stress fracture, vasculitis, peripheral neuropathy (see above), ischaemia (impaired circulation) and tarsal tunnel syndrome.

Examination may elicit discomfort on compressing the fore foot several times; if there is also a succession of sharp and painful clicks (Mulder's sign), the diagnosis can be certain.

Ultrasound may help to confirm.

Treatment usually involves ensuring correct footwear (no high heels or pointed/narrow toes, crepe/air soles are best) is used and any appropriate padding with metatarsal pads, silicone toes props and sometimes arch support may be helpful.

Occasionally, in severe cases, surgery may be necessary.

Anti-inflammatory medication, including steroid injection, is not particularly helpful.

*PLANTAR FASCIITIS is a form of heel pain. It involves inflammation of the thick band of tissue in the sole of the foot, called the plantar fascia. This strong tissue connects the heel to the base of the toes, maintaining the arch of the foot.

This inflammation tends to occur either after prolonged standing or from repetitive stress such as walking/running/athletic activity. (none of which are particularly likely in someone with arachnoiditis!)

Heel pain can also be caused by nerve entrapment, stress fracture, heel spur(calcaneal spurs: bony outgrowth) or as a part of inflammatory conditions such as rheumatoid arthritis or gout.

Bearing in mind the probable link between arachnoiditis and autoimmune disorders, it may be that plantar fasciitis is a feature of arachnoiditis.

The pain can be dull and intermittent that becomes sharp and persistent; it is usually worse in the morning or when walking, becoming milder later in the day. Having flat feet predisposes to fasciitis.

Putting your best foot forward

Heel pain can be successfully treated non-surgically in 95% of cases: measures include:

- Losing weight if overweight
- Reducing activities which worsen the pain
- Stretching exercises for Achilles tendon and calf muscles
- Warm water soaks with Epsom salts for 10 minutes twice a day or a whirlpool foot bath
- Properly fitted shoes; preferably with rubber/crepe/soft soles
- Shoe modification or inserts for arch support
- Massaging with ice (5-7 minutes) or use of cold pack (20 minutes) or alternate hot and cold*
- Anti-inflammatory medication e.g. ibuprofen
- Physical therapy: ultrasound treatment and muscle stimulation
- Wearing a special splint at night
- Steroid injection

*if you have reduced sensation you should check with your doctor as to the advisability of this.

TARSAL TUNNEL SYNDROME (TTS)

This, like carpal tunnel syndrome, is a nerve entrapment problem, in this case, the tibial nerve as it runs through the tarsal tunnel on the inside of the ankle.

This results in pain, burning and tingling in the sole of the foot. Unlike the pain of plantar fasciitis, which is worse in the morning, TTS causes pain which worsens as the day goes on, being worst at night.

Conservative treatment with arch supports and comfortable shoes may help, and if the nerve is inflamed, anti-inflammatory medication may effect some relief.

FOOT DROP

In some arachnoiditis patients with leg weakness, this can progress to the point where the muscles in the top part of the ankle are too weak to hold the foot at the 90 degree angle, this causing difficulties in walking.

The toes tend to catch on the floor, which leads to trips and falls.

Foot drop occurs most commonly if there is arachnoiditis at levels L4/5 and L5/S1 because this is the spinal level from which the innervation of the common peroneal nerve arises. This nerve supplies both sensory and motor innervation to the top of the foot (dorsum) and toes.

Whilst people may be aware of spinal problems at the relevant levels (arachnoiditis, epidural fibrosis, disc herniation etc.), there must be a thorough investigation to rule out other sites of nerve compression and causes such as diabetes, hyperthyroidism (pretibial myxoedema) and Polyarteritis nodosa.

Physiotherapy and/or splints may be of assistance in this condition.