Beware the Evil Bunions… And Morton's Neuroma!

Bunions: Conservative Therapy for a Common Problem

Bunions, characterized by a bony bump by the base of the big toe or first metatarsophalangeal joint (MPJ), or fifth metatarsophalangeal joint, are an extremely common foot deformity, especially among women.[1] As many as 50% of women have bunions, compared to one quarter of men, which is likely due to the restrictive shoes many women wear.[2] Bunions can also occur without the stress of feet

crammed into tight or ill-fitting shoes. Even in parts of the developing world where shoes are seldom worn, bunions appear in about one out of every 50 people.[3]

While the terms "hallux valgus"/"hallux abducto valgus" (HAV) and "bunion" often are used interchangeably, "bunion" specifically refers to the callus and inflamed tissue overlying the HAV deformity. Hallux valgus, literally defined, is "hallux" (big toe) "valgus" (deviating away from the midline). Bunions are generally classified as mild, moderate or severe. Many patients will suffer from painful bunions for years before seeking help.

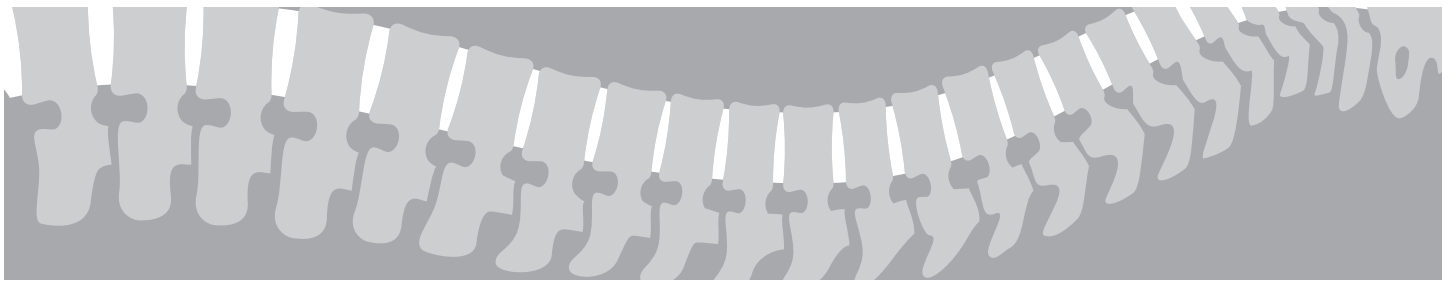
Anne was a 55 year patient with severe bilateral bunion pain in her big toe, turned out 36˚. She was scheduled for surgery, which she couldn't do because her husband was suffering with cancer and she couldn't be off her feet for 6 weeks. I fitted her with Foot Levelers functional orthotics and 9 months later, no bunion, no surgery, no pain and her big toe went from 36˚ to 24˚. Now, 17 years later, she is still pain free.

Dr. Tim Kelly, Atlanta, GA

Compromised foot structure and function are the source of bunions, which is hereditary; tight-fitting shoes compounds the problem. As Marianne Mullins writes in "Conservative Treatments For Hallux Valgus," published on the American Chiropractic Association's (ACA) website, "As the heel strikes the ground when walking, the joints of the foot unlock and absorb impact… The arch collapses, causing the feet to flatten. This flattening creates excessive tension on the tendon in the upper mid-foot that enables the big toe to bend upward (e.g., extensor hallucis tendon). The tendon contracts, which then forces the big toe to be pulled laterally toward the second toe. This causes the initial deviation."[4]

Over time, stress on the first metatarsal bone causes it to move away from the second metatarsal bone. "These changes produce more pressure on the side of the first metatarsal bone from shoes, which causes a thickening of bone resulting in a bunion deformity," the author continues.

"Normally, the presence of the transverse or Metatarsal (MT) arch will allow the bones to exist happily," says Dr. Kevin Wong, a foot and extremities expert. "Once we start wearing tight shoes or the arches start to fall after age



7, the forefoot changes. At first the foot starts getting wider and the more it does this, the more the first and fifth metatarsal heads start contacting the edges of the shoes. This contact stress induced the body to respond by laying down more calcium. This arthritic type response ends up in bunion formation. This only worsens over time when the feet and arches go unchecked. The more arch collapse that keeps happening, the flatter the MT arch and the more stress and calcium deposition will occur."

He adds that in many cases, a Hallux valgus of the first toe occurs in one or both feet. The big toe is pushed towards the midline of the foot because of all the pressure on the first metatarsal phalangeal joint.

Even after surgical intervention, bunions eventually recurred in patients, research shows.[8] This is because the underlying cause—excessive pronation and arch collapse—is not addressed by surgery.

While a patient is not born with a bunion, he or she may be born with the predisposition for the feet to over-pronate, leaving them more susceptible to the development of bunions.[5]

Examination

While some bunions are asymptomatic, many patients will present with pain and/or a decreased range of motion around the big toe joint. Chiropractic examination will help determine how severe a patient's bunion is and may include orthopedic and neurological testing, as well as diagnostic radiography. A digital foot scan can provide important information about the degree of pronation in each foot, as well as the degree of arch flattening.

Clinical Complications

Possible complications of bunions can include bursitis (inflammation of the small fluid-filled pads or bursae that cushion bones, tendons and muscles near joints), hammertoe and metatarsalgia. Bunions can further affect foot function so that pressure is disproportionately deflected onto other toes. Ingrown nail and corns and calluses may develop as a result.[6]

Clinical Management with the ASR™ Program

Adjust – Support – Rehabilitate

Treatment varies for bunions, depending on the severity of symptoms. For mild bunions, preventing the bunion from enlargement is key; this can be achieved with the patient wearing less restrictive footwear (a roomy toe-box is crucial) and use of functional orthotics.

Functional orthotics for bunions will support the foot, control pronation and redistribute plantar pressures for pain relief. In order to stop any further development of the bunion, orthotics need to be worn as frequently as possible. Once orthotic use has begun, recovery over a period of months can be expected.

"To be comprehensive," writes James Brantingham et al. in "Chiropractic Management of the Painful Bunion," conservative treatment of HAV may also include "manipulation and myofascial techniques, to lessen pain patterns that may be arising from soft tissue adhesions associated with the faulty biomechanics."[7]

James Mennel writes that manipulation of the bunion joint itself can be effective at relieving pain.[9] John Martin Hiss, having manipulated over 100,000 feet, found that about half of his patients who suffered from a painful bunion reported an improvement in symptoms after an adjustment.[10]

"Theraciser exercises that we teach for the ankle and foot

as well as rolling feet on the foot roller can also help patients with painful bunions," says Dr. Wong. Toe-spreading devices, toe straighteners, bunion splints or braces may also be considered.

"It is also of clinical interest that D.D. Palmer repeatedly refers to the benefits associated with manipulating the joints of the foot and ankle, particularly in regards to lessening the pain associated with an inflamed bunion," notes Brantingham. "It should be emphasized, however, that manipulation of a painful bunion should always be gentle and should only be performed once other causes of first MPJ pain have been ruled out; e.g., gout, psoriatic and rheumatoid arthritis and severe degenerative joint disease."

References

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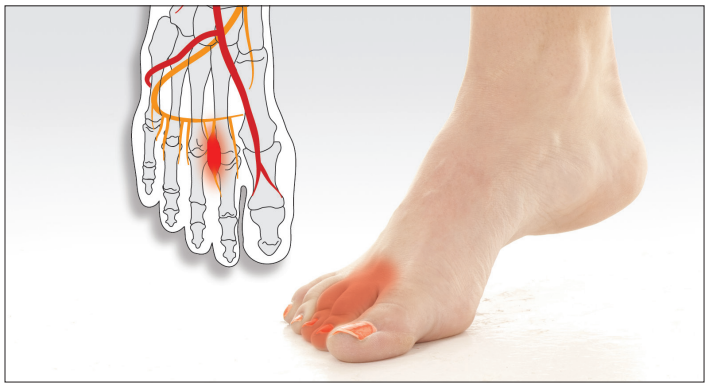
Morton's Neuroma

Morton's neuroma, which has many other names including Morton's metatarsalgia, Morton's neuralgia, plantar neuroma, intermetatarsal neuroma or interdigital neuroma, is a benign neuroma of one or more of the interdigital nerves, which are branches of the medial and lateral plantar nerves. It usually involves the second and third intermetatarsal spaces (the areas between 2nd–3rd and 3rd–4th metatarsal heads), with the third metatarsal space being the most common.

It is called Morton's neuroma, but was actually first described by an English chiropodist named Durlacher who lived from 1792–1864. Initially thought of as an entrapment of an interdigital nerve because of compression between the metatarsal heads, it is now thought that it is highly unlikely that could occur. Since the nerve is on the plantar side of the transverse metatarsal ligament and thus does not come in contact with the metatarsal heads, it is more



likely that the transverse metatarsal ligament is the cause of the entrapment.

Though it is labeled a neuroma, many references consider it a perineural fibroma, which is a fibrous tissue formation around nerve tissue. A neuroma is a thickening of nerve tissue that may develop in various parts of the body. This condition (Morton's neuroma) creates enlargement of the nerve, with a potential of permanent nerve damage.

Symptoms and Signs

Symptoms include pain, sometimes shooting, affecting the contiguous halves of two toes. Pain levels can vary widely from patient to patient. Tingling, burning and numbness are typical. Commonly, patients state they experience a feeling that something is inside the ball of the foot or a feeling that there is something in the shoe or a sock is bunched up.

Diagnosis

Direct pressure between the metatarsal heads will replicate the symptoms, as will compression of the forefoot between the finger and thumb so as to compress the transverse arch of the foot. This is called Mulder's sign.

Standard X-rays will not show the presence of a neuroma. But MRI imaging can demonstrate a neuroma. In some cases, Morton's neuroma lesions have been found using MRI in patients without symptoms.

Differential Diagnosis

There are other causes of pain in the forefoot. Too often all forefoot pain is categorized as neuroma. Other conditions which may be considered are, 1) capsulitis, which is an inflammation of ligaments that surround two bones. In this case, it involves the ligaments that attach the phalanx to the metatarsal. Inflammation from this can put pressure on a nerve and give neuroma-like symptoms. 2) Intermetatarsal bursitis especially between the third and fourth metatarsals can elicit neuroma-type symptomatology. 3) An osteochondritis of the metatarsal head, known as Freiberg's disease will also give a similar set of symptoms.

Other Factors

Obesity is one of them; simply put, more weight on the bones of the forefoot than they were designed to carry will contribute to the formation of a neuroma. Also, old injuries to the foot and ankle, which may change the gait can be a factor.

Treatment

Conservative treat consists of 1) Padding of the metatarsal arch, 2) Cryotherapy, utilizing the RICE (rest, immobilization, compression, elevation) or an ice bath, 3) Functional orthotics that support and stabilize the anterior transverse arch, 4) Activity modifications. Activities that put repetitive pressure on the neuroma should be avoided until the condition improves, 5) Shoe modifications. Wear shoes with a wide toe box and avoid narrow-toed shoes or shoes with high heels.

Chiropractic adjustments of the foot and lower extremity will also help to distribute the forces exerted on the foot in a more balanced way. Resistance exercises in all ranges of motion will also help to strengthen and stabilize the associated joints.

Medically, corticosteroid injections and NSAIDs are widely used along with neurectomy surgery. Another medical alternative is cryogenic neuroblastation. Also known as cryo injection therapy, this procedure causes the destruction of axons to prevent then from transmitting painful impulses.