

A GUIDE TO HALLUX LIMITUS/RIGIDUS

OVERVIEW

Hallux Limitus is a term used to describe a first metatarsophalangeal joint (MTPJ) that has developed a painful limitation in motion secondary to an acquired arthritic condition. This limitation in motion is progressive and may lead to a condition termed Hellus Rigidus, in which there is an absence of motion. During normal gait the first MTPJ dorsiflexes 50-75 degrees, and requires stability of proximal bones and joints to function properly. Abnormalities such as pronation, trauma, neuromuscular disease, arthritic conditions, or various in bone structure can interfere with normal first MTPJ function and lead to a decrease in motion.

APPEARANCE

Outwardly the condition may look like a bump on the top of the first metatarsal head with varying degrees of limitation of the first MTPJ motion.

SYMPTOMS

- Joint pain and stiffness at the first MTPJ.
- The joint may feel like it "locks up" at a certain point due to articular cartilage damage.
- Pain on the top or bottom of the first metatarsal head.
- Difficulty wearing shoes due to the excessive pressure on the bony prominences.
- Swelling and erythema.

DIAGNOSIS

- Physical examination and biomechanical assessment. The limitation in motion may not be appreciated in a non-weight bearing patient, proper loading of the first ray may reveal a functional limitation in motion. The patient may complain of pain beneath the second metatarsal or even the lateral aspect of the foot due to transfer of pressure from the first MTPJ as its function declines.
- X-rays will be used to help determine the severity of the condition, structural or positional deformity, as well as the proper course of treatment (Figures 1&2).
- Ultrasound may also be used to evaluate the dynamic functioning of the first MTPJ.

CONSERVATIVE TREATMENT

Initial treatment involves management of symptoms and biomechanical control.

- Non-steroidal anti-inflammatories or steroid injections.
- Sodium hyaluronate (Synvisc, Supartz) injections may provide relief in mild to moderate cases.
- Changes in shoe gear.
- Functional orthotics. Orthotics are an important part of treatment, especially when biomechanical abnormalities are present.

SURGICAL TREATMENT

Surgical treatment can be divided into joint preserving and joint destructive type procedures. The degree of motion limitation, condition of the joint, patient age, and symptoms help determine which type of procedure would be best for each patient. Joint preserving procedures include simple remodeling of the joint with resection of prominent osteophytes, osteotomy (Figure 3), and osteochondral replacement grafts. Joint destructive procedures include joint implants and arthrodesis.



Fig. 1: AP Radiograph demonstrating joint space narrowing, exostosis formation at the joint margins, and subchondral sclerosis



Fig. 2: Lateral radiograph demonstrating formation of a large dorsal exostosis on the first metatarsal head



Fig. 3: Lateral radiograph status dorsal exostosis resection and plantarflexory first metatarsal osteotomy



Chicago Podiatric Surgeons is dedicated to providing the best possible podiatric care for your patients. This care includes answering patient questions and ensuring they understand their treatment options. Of course, the understanding of treatment options starts with you, the primary care physician. We hope that you find this overview of common podiatric disorders to be helpful in the care of your patients, and that you look forward to receiving future topics from us.

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