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Big Toe Arthritis

Hallux Rigidus

Hallux Rigidus (HR) refers to stiffness (rigidus) of the joint at the base of the great toe (hallux). This joint is called the great toe metatarsophalangeal joint (MTPJ). The usual cause of HR is arthritis or wear and tear of the smooth cartilage that lines the joint. HR may be caused by a previous injury to the great toe or it may be part of a general medical condition eg gout. Often the cause is unknown - it just develops, particularly as people get older. It is probably of little surprise that this joint is prone to arthritis as forces up to 2x body weight passes through the great toe MTPJ during walking.

HR presents with stiffness and pain in the great toe MTPJ. If the symptoms are severe, it may limit walking distance, and compromise work and recreational activities. Bony spurs (osteophytes) develop around the great toe MTPJ and can cause pain by rubbing against tight fitting shoes. In an attempt to off-load the painful great toe, some people will preferentially walk on the outer border of the foot, causing transfer pain to the lesser toes.

Non-Operative Treatment

The main aims are to relieve pain and decrease loading and movement through the great toe MTPJ. In it's mildest form, HR may not need operative treatment. Simple lifestyle and activity modifications, weight loss, the use of a walking aid, taking pain killers (panadol and anti-inflammatories) and wearing appropriate shoe wear and orthotics (stiff insoles or shoes with a rocker bottom) can all be helpful. High heels and shoes with a narrow toe box should be avoided. Finally, a cortisone injection may offer relief of inflammation but as with most treatments, the degree and extent of relief varies from patient to patient.

Operative Treament

Surgery is considered when the above measures fail. There are 3 main surgical options to relief pain and improve quality of life. These include joint debridement +/- osteotomy, arthrodesis or fusion of the MTPJ and interposition arthroplasty. The best option for an individual patient depends on many factors including the severity of arthritis, the age and functional demands of the patient and the presence of arthritis in adjacent joints. The final choice is a joint decision between surgeon and patient.

Joint debridement +/- osteotomy

If the HR is mild, affecting only the upper part of the joint, this upper portion may be trimmed and the joint washed out. This is often combined with a realignment procedure *(Moberg osteotomy)* of the bone at the base of the great toe (proximal phalanx). In more advanced cases, the joint debridement may be combined with resection of part of the proximal phalanx and the insertion of some of the surrounding soft tissue into the resulting cavity (Interposition Arthroplasty). This combination can provide long lasting pain relief with improved movement of the great toe in the appropriate patient. In around 20% of patients, the arthritis is progressive and symptoms may return to a point where further procedures such as joint fusion may be required.

MTPJ replacement

Artifical joints that replace the surfaces of the diseased bone (in a similar fashion to hip and knee replacements) have been used to treat advanced arthritis. However, previous implants have shown poor results and any subsequent procedures (such as fusion) have become more difficult.

The current generation of implants appear to show more promising results but as yet, long-term reliability has not been established and for this reason, your surgeon does not currently recommend or perform this procedure.

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MTPJ arthrodesis (fusion)

This is the ‘gold standard’ procedure for moderate to severe arthritis. The remaining cartilage in the joint is removed, the bone on either side of the joint are fused together and held with screws or a plate.
95% of patients will derive good pain relief with this and it is the procedure of choice for active individuals. However the joint is stiffened and this limits the wearing of high heels. There is a small risk of developing arthritis in the next joint along the big toe but this is rarely troublesome.

Risks and Complications

As a guide 90- 95% of patients will derive significant benefit and will be happy with the surgical result. Less than 5-10% will develop a complication that may require further intervention. These include: wound healing problems, infection, damage to nerves and blood vessels, incomplete relief of symptoms, and in the case of arthrodesis, failure of the bones to knit together, requiring further surgery.

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Recovery

Hospital Stay	1 Night
Rest and Elevation	7 days
Suture Removal	2 weeks
Crutches Required	7 days
Weight bearing	as tolerated
Time off work	
- Seated	2-3 weeks
- Standing	4-5 weeks
Walking well	3 months
Swelling settles	3-6 months
Final Result	
Good	3 months
Better	6 months
Best	12 months

This brochure is a brief overview of hallux rigidus and is not designed to be all-inclusive.
If you have any further questions please discuss them with your surgeon.