

MICOD – 09/09/2024

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# MI-COD

MSS INDIA- Case Of the Day



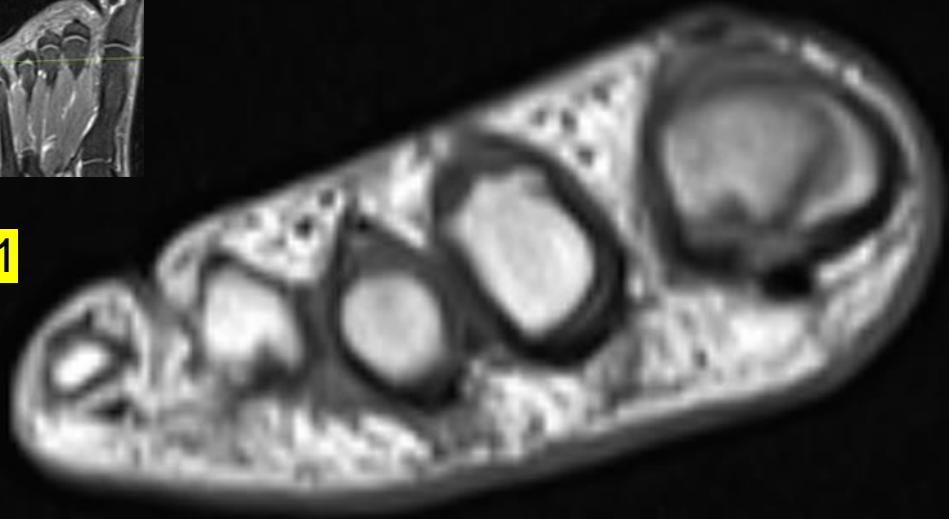
55 year old with forefoot pain

Diagnosis

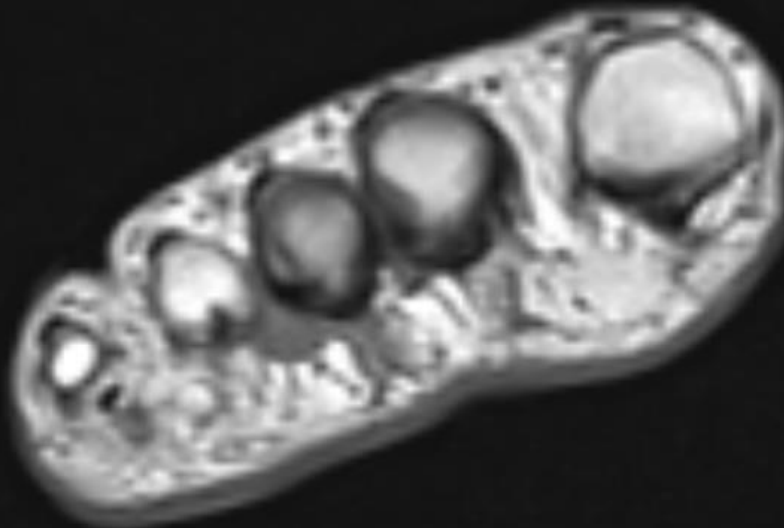
Q- Why is diagnosis more obvious on image labelled 2.



1



2



## ➤ MORTON NEUROMA

- Visibility of Morton neuroma as well as the size of Morton neuroma is significantly larger on MR images obtained in the prone position<sup>1</sup>.

1. Weishaupt D, Treiber K, Kundert H et al. Morton Neuroma: MR Imaging in Prone, Supine, and Upright Weight-Bearing Body Positions. *Radiology*. 2003;226(3):849-56.

# Morton neuroma

- Originally described in 1876 by Thomas Morton
- It is actually non-neoplastic. A true neuroma represents a proliferation of nerve tissue, either as a primary neoplasm or in response to nerve amputation.
- In Morton neuroma, swelling of the common digital nerve and perineural fibrosis result in mass-like enlargement, but a true neoplasm is not present.
- Most likely an entrapment syndrome – of the common plantar digital nerve
  - ✓ As it passes deep to the intermetatarsal ligament into a relatively small space between the metatarsal heads
  - ✓ Entrapment occurs when this confined space is further compromised on a repetitive basis.
- Most commonly seen in the 3rd & 2nd intermetatarsal spaces, as these are the smallest compared to the 1st & 4th intermetatarsal spaces, especially in young & middle aged females due to poorly fitting shoes & high heels. Athletes are also at risk.
- Classical presentation - Progressive pain, throbbing & numbness, walking on a marble & palpable mass may be present

# Morton neuroma

## MRI appearance

- ✓ A tear-drop / dumbbell shaped soft tissue mass between the metatarsal heads, projecting inferiorly into the plantar subcutaneous fat and located on the plantar side of the intermetatarsal ligament
- ✓ T1W : intermediate in signal intensity
- ✓ T2W : may be hypointense due to fibrosis
- ✓ Fluid may be present in the intermetatarsal bursa secondary to associated inflammation
- ✓ Post Contrast : Enhance ++

## Treatment

- ✓ Conservative - Modification of footwear and steroid injections successfully treat most individuals
- ✓ Surgery is reserved for those patients with a poor response to conservative measures