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Case Study

Intermetatarsal Bursitis: A case report (With Accompanying Images)

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Abstract:

Bursae are normally empty areas that are not filled with synovial fluid when they are in their natural form. Bursae are also referred to as bursa sacs. Bursae are sac-like structures that are sometimes seen in the body's joints. When synovial fluid begins to collect in the bursa, this is a symptom that a mechanical or inflammatory response has taken place in the region. The reaction might have been caused by friction or inflammation. Patients who are afflicted with rheumatoid arthritis often struggle with issues related to their inter-capito-metatarsal bursopathies (RA). The most common symptom is known as metatarsalgia, and it is characterised as a feeling that there is a "stone in the shoe." This condition may be very painful. It seems that the diagnosis is correct, at least according to the results of the magnetic resonance imaging and the ultrasound (MRI).

Keywords: *Metatarsalgia; Bursitis; Intermetatarsal; MRI.*

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Introduction: The ultrasound showed that there were no underlying abnormalities in the plantar nerve; rather, there was a small echogenic collection that encircled an interdigital region. This was shown by the examination. This was the conclusion reached. An interdigital collection that looks like an hourglass may be seen on the MRI. This was discovered by the radiologist. This collection reaches all the way down to the patient's foot and contains T1 hyposignal in addition to T2 hypersignal as well as DP FAT SAT. Additionally, this collection begins at the patient's head (Fig 1 and 2).

When the gadolinium was finally supplied, there was a discernible change in the outward presentation of the superinfected forms that could be seen in the margins of the image (Fig. 3).

Morton's neuroma is one of the possible diagnoses, and it can be recognised by its clinical symptoms, which include pain that extends along the surrounding toes, discomfort between the capitate and metatarsal bones, and sensitivity issues that arise in booklet form. Another one of the possible diagnoses is Morton's ganglion, and it can be diagnosed by its clinical symptoms.

The magnetic resonance imaging (MRI) test is an extremely helpful diagnostic method that can differentiate between a neuroma, which exhibits a T2 signal that is somewhere in the middle, and a bursa, which exhibits a T2 hypersignal that is completely distinct from one another. Both of these signals can be seen on the scan. A bursa may be recognised by the one-of-a-kind T2 hypersignal it emits. [1]

The treatment is typically conservative, and it consists of resting the affected area in conjunction with wearing a foot orthosis (to guarantee a retro-capital support in order to widen the bursa) and receiving a local treatment consisting of corticosteroid infiltration. Resting the affected area allows the bursa to widen,

and the foot orthosis helps widen the bursa. The bursa is allowed to expand when the damaged region is allowed to rest, and the foot orthosis ensures that the retro-capital support is provided. The bursa is a sac that is positioned between the skin and the tissue that is located underneath the skin. It is filled with fluid and acts as a barrier between the two layers of tissue. In the event that this treatment does not prove to be helpful, bursa excision surgery can be an alternative to consider.

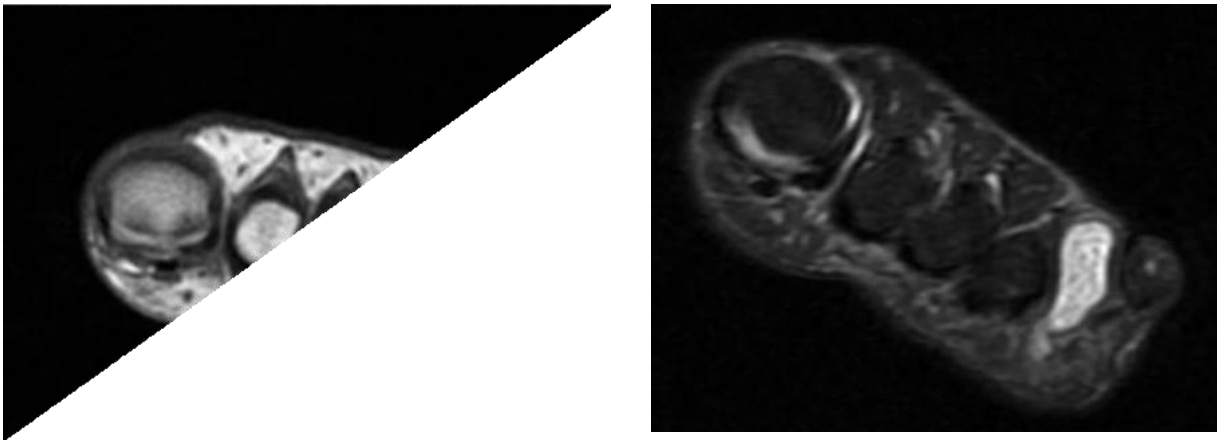

Figure 1: MRI of the foot was conducted on a patient who complained of pain in the forefoot, namely in the 4th interdigital area, after engaging in a significant amount of walking. The patient was a female with an age of 35 years old. Axial sections, T1-weighted (a) and T2-weighted (b), with fat saturation, indicating a small collection in the fourth space, with T1 hyposignal (=>) and T2 hypersignal (=>) accordingly for each slice. It is important to take notice of the fact that the collection has now gone all the way down to the bottom of the foot (>).

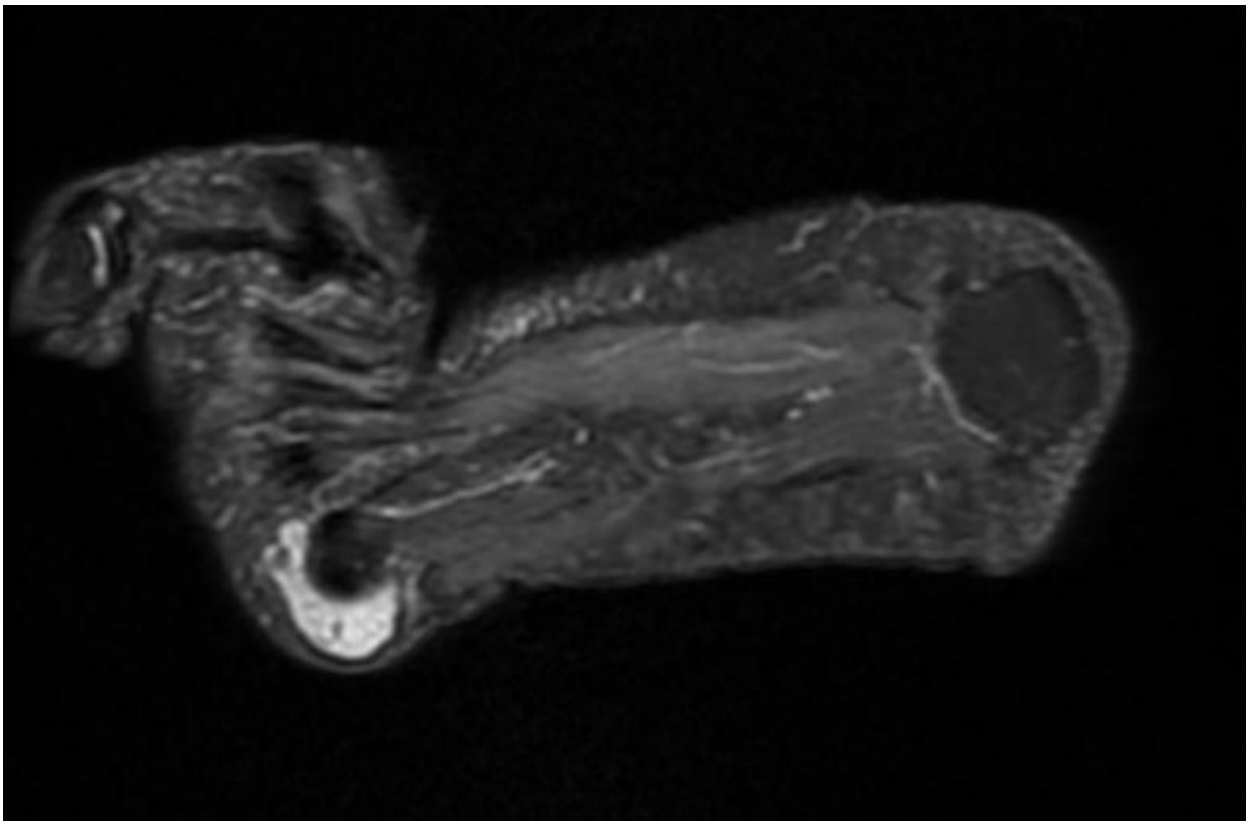

Figure 2: Bursitis beneath the fifth toe is seen in T2 hypersignal as a bulge at the sole of the foot when viewed in sagittal section.

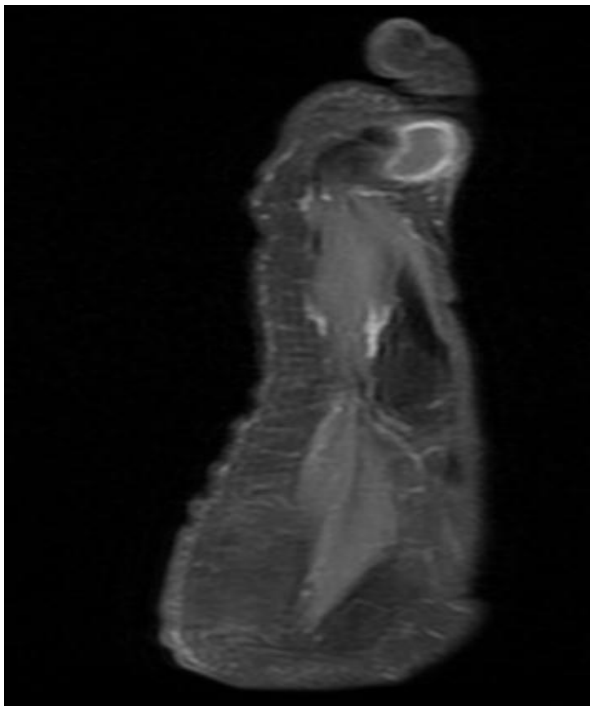

Figure 3: Axial (a) and coronal (b) sections, after gadolinium injection, showing peripheral enhancement of the collection (=>).

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