

Isolated nail lichen planus: An expert consensus on treatment of the classical form

Iorizzo M. et. al. *Journal of the American Academy of Dermatology*, Volume 83, Issue 6, 1717-1723, Dec. 1, 2020

Level of Evidence: 5

Lichen planus is a benign inflammatory disorder of unknown etiology that may affect the skin, oral mucosae, scalp, and nails. It affects fingernails more often than toenails and nail involvement is more commonly seen in adults. This brief literature review lays out a helpful algorithm in treating nail unit lichen planus based on expert consensus.

There are several items to consider before initiating the course of therapy. Firstly, the clinician must evaluate the severity of lichen planus: mild (distal nail plate ridging/splitting, scant onycholysis), moderate (previous listed symptoms + nail plate fissuring, marked onycholysis and subungual keratosis) or severe disease (previous listed symptoms + diffuse nail plate splitting, global onycholysis and erythematous lunula).

Secondly, consider the number of nails affected. Fewer than 3 nails involved (“Few-nail disease”) may be a cut-off point to initiate systemic therapy, however this may certainly vary on a patient-by-patient basis. For example, if the affected digits are the thumbs and 2nd fingers, initiation of systemic therapy may be considered sooner rather than later.

Lastly, consider the anatomy of the target nail and how long it would take to see improvement in symptoms during the treatment course (i.e. fingernail – 9 month to full plate regeneration vs. toenail – 12 month to full plate regeneration). Be sure to evaluate the percentage of therapy success as the nail(s) grow and symptoms resolve; altering treatment may be needed based on results.

The authors caution use of topical steroids given limited drug penetration / potential side effects and recommend either intralesional steroids or systemic immunosuppressives as management for nail unit lichen planus:

- For mild-moderate cases or involving <3 nails: local 5-10mg intralesional triamcinolone acetonide is the recommended first-line agent followed by 0.5-1mg/kg intramuscular triamcinolone acetonide and Acitretin 0.2-0.3mg/kg as second-line.
 - For severe cases or involving >3 nails: local 5-10mg intralesional triamcinolone acetonide +/- 0.5-1mg/kg intramuscular triamcinolone acetonide are the recommended first-line agents, Acitretin 0.2-0.3mg/kg as second-line and steroid-sparing immunosuppressants (Mycophenolate Mofetil, Azathioprine, Cyclosporine) as third-line.
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Insufficiency fractures: A rare cause of foot and ankle pain in three patients with rheumatoid arthritis

Hillyard et. al. *Radiology Case Reports*, Volume 13, 855-861, 2018

Level of Evidence: 4

Rheumatoid arthritis (RA) is a chronic, autoimmune inflammatory arthritis characterized by symmetric and destructive synovitis of articular cartilage, leading to loss of movement and pain. Although rare, insufficiency fractures can be seen in longstanding RA and are typically solitary; such fractures are seen primarily affecting the vertebrae, femur, pelvis, and in the lower extremity the second metatarsal and calcaneus bones.

This case report highlights three separate cases of multiple insufficiency fractures in the foot and ankle caused from longstanding RA. All patients were diagnosed with MRI imaging, showing increased bone marrow signal on T2 imaging with some accompanying hypointense periosteal callus formation. In 2 of the 3 patients, multiple foot and ankle bones were affected including the distal tibia, lateral malleolus, calcaneus, fifth metatarsal base, phalanges and the intermediate cuneiform. All patients were treated conservatively with CAM boot immobilization and close rheumatologist/orthopedist follow-up.

The cause of insufficiency fractures in RA patients is multi-factorial. Chronic joint inflammation can lead to osteoporosis of cancellous and subchondral bone from inflammatory cytokine imbalance (TNF-alpha, IL 1, etc.). Such imbalance increases expression of nuclear factor kappa-B ligand (RANKL), which binds to RANK causing subsequent bone resorption. Medication management for RA also causes bone loss via glucocorticoid-induced bone stiffness / reduced bone tensile strength and methotrexate-induced osteopathy.

Providers should have a high index of suspicion for such fractures in longstanding RA patients whose foot and/or ankle pain worsens despite conservative measures and otherwise normal plain film radiography; MRI imaging is recommended to adequately diagnose these fractures and prevent further complications.

Case study: Schwannoma of the tibial nerve in a patient with a history of neurofibromas, Ritter et. al.
The Foot and Ankle Online Journal 12 (3), 2019

Level of Evidence: 4

This surgical case study describes a 69-year-old female patient presenting with tarsal tunnel-like pain (numbness and tingling) to their plantar right foot. The patient had the pain for 5 years and failed previous treatment modalities including custom orthotics, physical therapy and corticosteroid injection. Review of her past medical history was pertinent for neurofibromas of the lumbar spinal nerve roots. A previous EMG revealed tibial neuropathy and degeneration medial plantar nerve, leading to a diagnosis of tarsal tunnel syndrome. The patient failed additional conservative care and had an MRI performed, revealing a 4.2 x 2.2 x 2.1 hyperintense well-encapsulated lesion of the tibial nerve, consistent with the diagnosis of schwannoma.

Subsequently, the patient was scheduled for surgical excision. The mass was excised in toto with an amniotic graft applied to the remaining degenerated tendon to promote healing prevent adhesions. Pathologic evaluation revealed an encapsulated biphasic tumor composed of compact hypercellular areas and mixed hypocellular areas with foci of hyalinization with no malignant features, consistent with a diagnosis of schwannoma. The patient's postoperative course was uneventful and at one year follow-up had no functional limitations but some residual paresthesias to her foot.

Schwannomas are benign, encapsulated peripheral nerve sheath tumors, with approximately 10% of cases found in the foot; even fewer cases are associated with tibial nerve entrapment and tarsal tunnel syndrome. Neurofibromas are not typically found in the foot and ankle, with only one report of a schwannoma associated with a neurofibroma in the tarsal tunnel. This case is unique given the presence of schwannoma eliciting secondary tarsal tunnel syndrome with concomitant spinal neurofibromas.
