

Letter to Editor

## Harpoon nail – A trespasser

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Dear Editor,

Onychocryptosis or ingrown nail is a condition where the lateral nail fold is penetrated by the lateral nail plate, causing an inflammatory response, leading to pain, granulation tissue formation, and hypertrophy of nail folds. The most common type is a distal-lateral ingrown nail. It most commonly affects the great toe.<sup>[1]</sup> Harpoon nail is a severe variant of distal-lateral ingrown nail, where a sharp spur of the nail plate pierces the periungual tissue, forming a tract and emerging at the hyponychium. The inciting nail spur may be difficult to recognise clinically. The patient tries to relieve pain by cutting more of the nail corner but is unable to clip the lateral most part embedded under the skin, leaving a hook-like a piece at the lateral border. This grows onwards and pierces the nail fold, aggravating pain.<sup>[1,2]</sup> A vicious cycle of pain, attempts to relieve it, and flawed nail cutting lead to aggravation of the condition.<sup>[1]</sup> We present the details of a case with a harpoon nail.

A 50-year-old man presented with pain and discharge from his left great toe for a few months. The patient admitted to often clipping his nails at the sides and distal end to reduce the pain. On examination, the left hallux was exquisitely tender, with erythema and crusting in the lateral nail groove [Figure 1]. There was distal onycholysis with reddish-purple discoloration of the nail plate. A crusted papule was noted over the distal most part of the lateral nail groove. The contralateral nail fold appeared normal.

A diagnosis of an ingrown nail was made and lateral nail avulsion with chemical matricectomy was planned. Intraoperatively, a nail spicule was seen piercing the distal nail fold [Figure 2], creating a tunnel about 2 mm in depth, through it. A lateral partial nail avulsion was done and the tunnel was deroofed [Figures 3 and 4]. This was followed by lateral chemical matricectomy with 88% phenol. Post-operative



Figure 1: Distal-lateral ingrown toe nail of left hallux.

course was normal, with inflammation subsiding rapidly and complete healing over the next 2 weeks. The patient has remained recurrence-free for the past 1 year.

Harpoon nail is an uncommon variant of distal-lateral ingrown nail, reported first by Richert *et al.*<sup>[3]</sup> It resembles the harpoon, an instrument with a distal sharp end and a broad base, used to hunt marine animals. It is designed to cause maximum damage to the animals, such that the animals get immobilised in pain after being hit by the harpoon. The eponymous nail spicule also causes exquisite pain and incites severe inflammation associated with this condition.

The development of a harpoon nail is attributed to a vicious cycle of pain, swelling and wrong technique of nail clipping.<sup>[1]</sup> The condition typically begins with epidermal disruption in the lateral nail sulcus. Increased pressure from the nail plate on the surrounding soft tissue, particularly when combined

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**Figure 2:** Intraoperative view showing the harpoon nail. Lateral most part of the nail plate is forming a spicule (arrow) and piercing the lateral nail groove. Inset shows a harpoon, an instrument for hunting.



**Figure 3:** Lateral partial avulsion of nail plate showing its morphology with sharp end and broad base.

with tight footwear and excessively short nail trimming causes the distal pulp to be pushed upwards, resulting in pain at the distal corner. For nails with a broad and pronounced curvature, the distal lateral corners are trimmed at an angle, forming a small spicule that penetrates the lateral nail fold as the nail advances.<sup>[4]</sup> This penetration can incite a foreign body reaction, leading to inflammation, formation of granulation tissue, and potential infection. To relieve discomfort, the patient may resort to using nail clippers to dig into the lateral nail fold. However, this approach often fails to address the cause of pain, which is the spur at the deepest part of the nail plate. As the nail continues to grow, this fragment may further



**Figure 4:** Epithelialized tunnel (circled) created by the harpoon nail, which has been deroofed after lateral partial nail avulsion.

penetrate the nail groove, leading to increased discomfort.<sup>[1,2]</sup> The acute condition, if left untreated, progresses to the chronic form, where the inflammation resolves and the epithelialisation of the fistulous tract takes place. Acute presentation as an erythematous, oozing and crusted papule, corresponds to the spur emerging through the epidermis on the lateral and distal walls of the toenail and directed toward the lateral sulcus.<sup>[5]</sup>

The mainstay of treatment is surgery. It consists of deroofing the canal, removing the nail spur ('harpoon'), lateral nail plate avulsion, and chemical matricectomy.<sup>[4]</sup> This worked to the patient's benefit in our case, who has remained symptom-free. Other options include wedge resection, Winograd technique, Vandenbos procedure, or super-U technique, depending on the thickness of the nail fold.<sup>[2]</sup>

To conclude, a harpoon nail is an uncommon condition that requires careful examination. We report this case to raise awareness about its presentation and management.

#### Authors' contributions

CCC Contributed towards Concept, Design, Literature search, Data acquisition, and Manuscript preparation. CG contributed towards concept, Design, Definition of intellectual content, Literature search, Data acquisition, Manuscript editing, and will act as Guarantor.

#### Ethical approval

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#### Declaration of patient consent

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### Conflicts of interest

Dr. Chander Grover is on the editorial board of the Journal.

### Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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