



Surgical & Cosmetic Dermatology

APOIO CIENTÍFICO:



Sociedade Brasileira de Cirurgia Dermatológica

www.surgicalcosmetic.org.br/

Harpoon nail: an unusual form of onychocryptosis

Unha em arpão: uma forma incomum de onicocriptose

DOI: <http://www.dx.doi.org/10.5935/scd1984-8773.20221400107>

ABSTRACT

Onychocryptosis is a frequent nail disease, which most commonly affects the toes. It has some variants, including the little known "Harpoon Nail". The diagnosis is usually clinical, and the treatment is surgical, with different techniques described in the literature. We report the case of a 25-year-old man with a harpoon nail on the left hallux and the surgical method used for treatment with excellent results

Keywords: Nail diseases; Nails ingrown; Hallux

RESUMO

A onicocriptose é uma doença ungueal frequente, que afeta mais comumente os pododáctilos e apresenta algumas variantes, dentre as quais a pouco conhecida "unha em arpão". O diagnóstico costuma ser clínico, e o tratamento cirúrgico emprega diferentes técnicas descritas na literatura. Relatamos o caso de um paciente masculino, 25 anos, com unha em arpão no hálux esquerdo, e a técnica cirúrgica utilizada para o tratamento com excelente resultado.

Palavras-chave: Doenças da unha; Hallux; Unhas encravadas

Case report

Authors:

Andréa Abê Pereira^{1,2}
Jéssica Lüders Bueno^{1,2}
Raquel Kupske^{1,2}
Leonardo Albarello²
Renan Minotto²

¹ Universidade Federal de Ciências da Saúde de Porto Alegre, Department of Dermatology, Porto Alegre (RS), Brazil.

² Santa Casa de Misericórdia de Porto Alegre, Department of Dermatology, Porto Alegre (RS), Brazil.

Correspondence:

Andréa Abê Pereira
andrea.abetm@gmail.com / E-mail alternativo: deiabah@yahoo.com.br

Financial support: None.

Conflict of interest: None.

Submitted on: 28/10/2021

Approved on: 16/11/2021

How to cite this article:

Pereira AA, Bueno JL, Kupske R, Albarello L, Minotto R. Unha em arpão: uma forma incomum de onicocriptose. Surg Cosmet Dermatol. 2022;14:e20220107.



INTRODUCTION

The ingrown nail, also called onychocryptosis, results from a conflict between the nail plate and adjacent soft tissues, causing an inflammatory reaction that can lead to the appearance of granulation tissue and hypertrophy of nail folds.¹ It most commonly affects the hallux in its distal lateral portion.^{2,3}

The literature describes some uncommon variants of onychocryptosis, such as the harpoon nail, where a sharp spike of the nail penetrates the periungual tissue forming a channel and emerging in the hyponychium. We report a case of this variant and its surgical treatment.

CASE REPORT

A 25-year-old man, student, sought medical care with a complaint of ingrown toenail of the left hallux for more than two years, accompanied by intermittent pain, more intense at the beginning of the condition. On physical examination, one of the lateral nail folds of the left hallux presented a marked increased volume, covering a good part of the nail plate and extending to the hyponychium. The end of the lateral nail fold had an erythematous papulo-nodular lesion covered by a small crust and surrounded by a keratotic collarette (Figure 1). In the contralateral fold, we identified a lesser degree of edema.



FIGURE 1: Papulonodular, erythematous lesion covered by a small crust and surrounded by a keratotic collarette in the distal lateral portion of the left hallux

Due to the diagnosis of onychocryptosis in the two lateral nail folds and the formation of a harpoon nail in one of them, we referred the patient for surgery. We performed the resection of excess tissue from the lateral folds, which allowed the visualization of the sharp spike of the nail on the lateral portion of the nail plate (Figure 2). Then, we followed with the avulsion of a lateral nail strip and finished with chemical cauterization (phenol 88%) of the lateral segment of the nail matrix and the portion of the nail lateral folds (Figure 3). Healing occurred by secondary intention.

The patient evolved well in the postoperative period, with no signs of recurrence and a good aesthetic result after six months of progression (Figure 4).

DISCUSSION

Nail ingrown results from constant pressure from the nail plate on adjacent soft tissues,⁴ leading to a local inflammatory process. It is a frequent condition, with a prevalence of 2.5-5%, more common in men in the third and fourth decades of life, but the literature has already described congenital cases and in the elderly.¹ It most frequently affects the distal lateral portion of the nails of the halluces.^{2,3} It can present pain, erythema, ede-



FIGURE 2: Sharp nail spike on the lateral portion of the nail plate of the left hallux



FIGURE 3: Immediate postoperative period, after avulsion of lateral bands of the nail plate of the left hallux and chemical cauterization (phenol 88%) of the lateral segment of the nail matrix and the bloody portion of the lateral nail folds



FIGURE 4: Result after six months of surgery

ma, secretion, and granulation tissue in the periungual tissues.² Several factors contribute to the onset and progression of the disease: incorrect nail cutting (too short or rounded), sharp curvature of the nail plate, wide and thick nail fold, hyperhidrosis, trauma, use of inappropriate footwear, tight socks, physical activities, and even obesity.^{1,3}

Onychocryptosis can be classified according to different stages described by Heifetz, Mozena, and Martinez Nova, with some modifications among them. In general, in stage I, there is mild erythema and edema of the nail bed with pain on digital pressure, not exceeding the limits of the nail plate.³ In stage II, pain, swelling, and erythema are more intense, and abscess formation may occur in the lateral nail fold, exceeding the nail plate limits (in phase IIa, the fold measures <3 mm; in phase IIb, the fold measures >3 mm). In stage III, there is chronic hypertrophy of the lateral nail fold and the presence of granulation tissue. In stage IV, there is a chronic deformity, affecting the nail plate, the lateral nail folds, and the distal nail fold.^{1,3}

We report the case of an uncommon variant of onychocryptosis described for the first time by Richert, Caucanas, and Di Chiacchio (2014):⁴ the harpoon nail. This name is due to its resemblance to a marine hunting instrument that has a sharp tip and a wide base, the harpoon.² It is a specific variant of distal lateral ingrowing. It occurs when the patient manipulates the side of the nail blade to relieve the pain of an ingrown nail in the nail fold but is unable to cut the most external and deepest part of the nail plate. Thus, the remaining lateral nail fragment grows and creates a nail spicule, which crosses the periungual tissue and forms a fistulous path, emerging in the hyponychium.^{2,4,5} Its diagnosis is clinical^{1,5} and can be aided by exams such as high-frequency ultrasound (HFUS), which will show the ingrowing in the lateral nail fold associated with the nail spicule.⁵

The harpoon nail treatment is surgical. If not performed, the condition may become chronic: the inflammation can disappear, and the canal containing the nail spicule can epithelialize.⁵ The literature describes several surgical techniques, and the choice of any one of them depends on the stage and type of onychocryptosis and the surgeon's ability. The surgical approach that we used in this report was one of the most common techniques found in the literature. The procedure starts by opening the canal containing the nail spicule, removing the excess periungual tissue, then avulses the lateral nail band, and finishes by the chemical cauterization of the lateral spicule of the matrix with phenol 88%.^{2,4,6} Alternatively, a wedge resection can be performed, containing the lateral nail fold with the nail spicule and its canal (Vandenbos procedure) or a Super U⁷, where all excess tissue is removed in a "U" shape.¹

The harpoon nail is a little-known clinical variant of onychocryptosis that affects the individual's quality of life. Through an appropriate surgical approach, it is possible to achieve resolution of the condition with good aesthetic results and without recurrence ●

REFERENCES:

1. Thakur V, Vinay K, Haneke E. Onychocryptosis - decrypting the controversies. *Int J Dermatol.* 2020;59(6):656-69.
2. Sandhiya R, Rao R. "An uncanny kin of the ingrown toenail": harpoon nail and the surgical challenge in its management. *J Cutan Aesthet Surg.* 2020;13(2):142-44.
3. Martínez-Nova A, Sánchez-Rodríguez R, Alonso-Peña D. A new onychocryptosis classification and treatment plan. *J Am Podiatr Med Assoc.* 2007;97(5):389-93.
4. Richert B, Caucanas M, Di Chiacchio N. Surgical approach to harpoon nail: a new variant of ingrowing toenail. *Dermatol Surg.* 2014;40(6):700-1.
5. Mello CDBF, Souza MR, Chiacchio NG; Chiacchio N. Ultrassonografia no diagnóstico da "unha em arpão". *Surg Cosmet Dermatol.* 2019;11(4):323-24.
6. Bostanci S, Kocyigit P, Gürgey E. Comparison of phenol and sodium hydroxide chemical matricectomies for the treatment of ingrowing toenails. *Dermatol Surg.* 2007;33(6):680-5.
7. Richert B. Surgical management of ingrown toenails - an update overdue. *Dermatol Ther.* 2012;25(6):498-509.

AUTHORS' CONTRIBUTION:

Andréa Abê Pereira  ORCID 0000-0001-7995-5050

Approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; critical literature review; critical revision of the manuscript.

Jéssica Lüders Bueno  ORCID 0000-0002-3840-310X

Approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; critical literature review; critical revision of the manuscript.

Raquel Kupske  ORCID 0000-0003-3763-7366

Approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; critical literature review; critical revision of the manuscript

Leonardo Albarello  ORCID 0000-0002-8785-6885

Approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; data collection, analysis, and interpretation; active participation in research orientation; intellectual participation in propaedeutic and/or therapeutic conduct of studied cases; critical literature review; critical revision of the manuscript.

Renan Minotto  ORCID 0000-0002-1451-0461

Approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; data collection, analysis, and interpretation; active participation in research orientation; intellectual participation in propaedeutic and/or therapeutic conduct of studied cases; critical literature review; critical revision of the manuscript.