Conflicts of interest

None declared.

References

1. Rashmi TM, Sathish HS. Earliest details of dermatology by Ayurveda. An Bras Dermatol. 2021;96:649–50.
2. Ferreira IG, Weber MB, Bonamigo RR. History of dermatology: the study of skin diseases over the centuries. An Bras Dermatol. 2021;96:332–45.
3. Mirzaei MR, Ghazi-Sharraf J, Mohammadinasab R. Letter to the Editor regarding: ”History of dermatology: the study of skin diseases over the centuries”. An Bras Dermatol. 2021;96:648–9.

Iago Gonçalves Ferreira a,b,c, Magda Blessmann Weber a,b, Renan Rangel Bonamigo b,c

a Universidade Federal de Ciências da Saúde de Porto Alegre, Porto Alegre, RS, Brazil
b Santa Casa de Misericórdia de Porto Alegre, Porto Alegre, RS, Brazil
c Faculty of Medicine, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil

*Corresponding author.
E-mail: iagof@ufcsap.edu.br (I.G. Ferreira).
Received 10 May 2021; accepted 30 May 2021
Available online 22 July 2021
https://doi.org/10.1016/j.abd.2021.07.001
0365-0596 © 2021 Published by Elsevier España, S.L.U. on behalf of Sociedade Brasileira de Dermatologia. This is an open access article under the CC BY license (https://creativecommons.org/licenses/by/4.0/).

Considerations on the development of surgical techniques for the treatment of onychocryptosis a,b,c

Dear Editor,

As onychocryptosis is a frequent demand in dermatological assistance, and its surgical management requires both specific training and indication criteria, we read with interest the article by Ma, 1 which aimed to describe a new surgical approach for onychocryptosis.

Currently, there is no consensus, nor a body of evidence on the specific differences of the several surgical techniques for onychocryptosis, or on their comparison in terms of effectiveness, morbidity, infection, cost-effectiveness and technical difficulty. Therefore, the development of new methods is of scientific relevance and should be critically appreciated considering the described surgeries, especially regarding the technical differences and recurrence rates after 12 months.

Despite the interesting results presented by Dr. Ma, the proposed surgical technique sequence is very similar to the classic matricectomy described by Winograd (1929), 2 which has undergone several adaptations over the years. 3,4 Moreover, although low, there is an expected recurrence rate of approximately 6% in virtually all studies that used the Winograd method or its variants. 4 As this is a similar surgical approach, the result shown by Ma, who found no recurrence in 67 surgeries (with a follow-up of 6 to 12 months), may not represent a difference in relation to the expected rate of 6% (p = 0.119 – Fisher Exact test) due to modest sample size. However, it can also be due to the small percentage of cases with grade I onychocryptosis, which usually do not show recurrence and whose frequency was not discriminated by the author.

Table 1 depicts the main technical characteristics of the Winograd method and its main variants, its recurrence rates, in addition to chemical matricectomy with 88% phenol and 80% trichloroacetic acid, for comparison. 5

Surgical techniques for the treatment of onychocryptosis require careful systematization of the operative sequences and approach to the matrix, as well as the precise indication according to tissue hyperplasia, nail plate situation and pyogenic granuloma. Only the comparative analysis of the performance of the techniques, stratified according to the indications, can lead to criticism, aiming to maximize the performance of the procedures.

Due to the peculiar anatomy of the nail apparatus, surgical approaches to onychosis require specialized training by the dermatologist. However, despite the high prevalence of onychocryptosis and impact on quality of life, there is a lack of well-conducted comparative clinical trials that favor the personalization of indications. Moreover, it is crucial to review the previously described surgical techniques, both for their historical and scientific value, when one proposes the standardization of a new surgical technique.

© How to cite this article: Miola AC, Alcantara GP, Miot LDB, Miot HA. Considerations on the development of surgical techniques for the treatment of onychocryptosis. An Bras Dermatol. 2021;96:651–3.
©© Study conducted at the Department of Dermatology, Faculdade de Medicina de Botucatu, Universidade Estadual Paulista, Botucatu, SP, Brazil

Table 1

| Technique                  | Recurrence Rate | Comparison
|----------------------------|-----------------|-------------|
| Winograd Method            | 6%              | Phenol 88%  |
| Chemical Matricectomy      | 80%             | Trichloroacetic Acid 80% |

651
Table 1  Characteristics of the main surgical techniques described for onychocryptosis.

| Publication                                      | Technique                                                                 | n   | Recurrence rate                      |
|--------------------------------------------------|---------------------------------------------------------------------------|-----|--------------------------------------|
| Winograd AM. J Am Podiatr Med Assoc 2007; 97:274-7 | Incision of the eponychium and matrix curettage, dressing                | 10  | Zero in 6 months                     |
| Uygur E, et al. Int J Surg 2016; 34:1-5.         | Removal of the nail plate to the matrix                                   | 128 | 14% in 6 months                      |
| Akar E. J Foot Ankle Surg 2017; 56:474-7         | Winograd method                                                           | 102 | Zero in 12 months                    |
| Karaca N. et al. Ann Fam Med 2012; 10: 556-9     | Electrocoagulation of the matrix                                          | 348 | 0.3% in 24 months                    |
| Aksoy, et al. Dermatol Surg 2009; 35:462-8.      | Partial excision of the proximolateral matrix and phenolization of the matrix | 52  | 3.9% in 12 months                    |
| Osan F, et al. Dermatol Surg 2014; 40:1132-9.    | Transposition flap of proximal nail fold with partial matricectomy        | 92  | 2% in 10 meses (group 1) vs. Zero in 10 months (group 2) |
| Dąbrowski M, et al. Ann Med Surg 2020; 56:152-160 | Wedge-shaped excision of tissue lateral to the nail plate                 | 54  | 1.8% in 11 months                    |
| Kimata, et al. Plast Reconstr Surg 1995; 95:719-24 | Preservation of the nail matrix                                           | 537 | 1% in 6 months                       |
| Barreiros H, et al. An Bras Dermatol 2013; 88:889-93 | Partial avulsion of the lateral nail plate                              | 197 | 1.5% in 12 months                    |
| Muriel-Sanchez JM, et al. J Clin Med 2020; 9:845 | Chemical matricectomy with 8% phenolization of the nail matrix            | 76  | 1.52% in 6 meses (group 1) vs. 2.8% in 6 months (group 2) |
| Montesi S, et al. Dermatology 2019; 235:323-6.   | Avulsion of the lateral nail plate to the eponychium and matrix            | 622 | 1.1% in 12 months                    |
| Terzi E, et al. Dermatol Surg 2017; 43: 728-33.  | 88% phenolization of the nail matrix for 4 minutes                        | 58  | 3.3% in 12 months                    |

Financial support

None declared.

Authors’ contributions

Anna Carolina Miola: Approval of the final version of the manuscript; drafting and editing of the manuscript; critical review of the literature; critical review of the manuscript.

Giovana Piteri Alcantara: Drafting and editing of the manuscript; critical review of the manuscript.

Luciane Donida Bartoli Miot: Drafting and editing of the manuscript; critical review of the manuscript.

Helio Amante Miot: Approval of the final version of the manuscript; drafting and editing of the manuscript; critical review of the literature; critical review of the manuscript.

Conflicts of interest

None declared.

References

1. Ma H. Six steps to standardize surgical approach for ingrown toenail. An Bras Dermatol. 2021;96:47–50.
2. Winograd AM. A modification in the technic of operation for ingrown toe-nail. 1929. J Am Podiatr Med Assoc. 2007;97: 274–7.
3. Uygur E, Çarkçi E, Şenel A, Kemah B, Turhan Y. A new and simple suturing technique applied after surgery to correct ingrown toenails may improve clinical outcomes: A randomized controlled trial. Int J Surg. 2016;34:1–5.
4. Acar E. Winograd Method Versus Winograd Method With Electrocoagulation in the Treatment of Ingrown Toenails. J Foot Ankle Surg. 2017;56:474-7.
5. Kimata Y, Uetake M, Tsukada S, Harii K. Follow-up study of patients treated for ingrown nails with the nail matrix phenolization method. Plast Reconstr Surg. 1995;95: 719–24.

Anna Carolina Miola, Giovana Piteri Alcantara, Luciane Donida Bartoli Miot, Helio Amante Miot.
On the development of surgical techniques for the treatment of onychocryptosis – Answer

Dear Editor,

I am very pleased with the attention given to my article. As mentioned in the table of the correspondence, there are numerous surgical techniques for onychocryptosis. In the first paragraph of my article, I have cited the literature to emphasize that all the surgical strategies can be categorized into two main approaches: either narrowing the nail plate or debulking the soft tissues. And I have chosen the first one.

The key point to narrow the nail plate is to destroy the corresponding part of the nail matrix completely. Treatments include surgery, electrocautery, and chemicals, etc. The most assured is the surgical excision. There are clear points and lines of reference in every step of the surgical approach I proposed. In the discussion, I emphasized that Step 4 is the most important procedure to avoid recurrence. I was very careful to cut off all the tissue around the corresponding part of the nail matrix in all my 67 patients. And there are still two suggestions: 1) to see the white phalanx; 2) to perform a little wedge-shaped resection. As a result, I am very confident to guarantee low recurrence or even no recurrence after surgery.

I have propagated my technique in more than fifteen hospitals in southern China. Most dermatologists only need to observe and listen once to achieve results similar to mine. Even so, with the established method, there may be a few differences in the final recurrence rate among different doctors.

Financial support

This was supported by Zhumai Science and Technology Plan Medical and Health Project (ZH2202200003HJL).

Author contributions

Han Ma: Approval of the final version of the manuscript; design and planning of the study; drafting and editing of the manuscript; collection, analysis, and interpretation of data; effective participation in research orientation; intellectual participation in the propaedeutic and/or therapeutic conduct of the studied cases; critical review of the literature; critical review of the manuscript.

Conflicts of interest

None declared.

References

1. Man H. Six steps to standardize surgical approach for ingrown toenail. An Bras Dermatol. 2021;96:47–50.
2. Miola AC, Alcantara GP, Miot LDB, Miot HA. Considerations on the development of surgical techniques for the treatment of onychocryptosis. An Bras Dermatol. 2021;96:651–3.
3. Richert B. Surgical management of ingrown toenails – an update overdue. Dermatol Ther. 2012;25:498–509.

Han Ma

Department of Dermatology, Guangdong Provincial Key Laboratory of Biomedical Imaging, Fifth Affiliated Hospital, Sun Yat-sen University, Zhuhai, Guangdong Province, China
E-mail: mhan@mail.sysu.edu.cn

Received 30 April 2021; accepted 4 May 2021
Available online 15 July 2021

https://doi.org/10.1016/j.abd.2021.05.003
0365-0596 © 2021 Sociedade Brasileira de Dermatologia.
Published by Elsevier España, S.L.U. This is an open access article under the CC BY license (https://creativecommons.org/licenses/by/4.0/).