

A CASE STUDY OF INGROWING TOE - COMPLETE NAIL AVULSION FOLLOWING APAMARG KSHARA APPLICATION

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ABSTRACT

Ingrown toe nail is common problem presenting to the surgeon. A wide range of conservative and surgical methods are available for the treatment of Ingrown toe nail like, simple incision & drainage of the abscess, the partial nail excision (wedge resection), nail avulsion and radical excision (Zaddik's procedure) of the nail. But the surgical treatment only is associated with high recurrence rate. The aim of present study is to use of *Apamargkshara* after complete nail avulsion and see the response of the treatment in order to develop some local guidelines in our scenario. In this study we document a case of ingrown toenail of the great toe, which had developed a granulation mass and enveloped the nail. We describe here the chemical cauterization of the nail matrix with *Apamargkshara* after complete avulsion of nail, a treatment that had good results.

Keywords: In growing toe, nail avulsion, chemical cauterization, *Apamargkshara*.

INTRODUCTION

In growing toe nail is a painful condition of foot in which the edge of a nail, usually the great toe nail, grows into the surrounding soft tissue (paronychia) causing inflammation and subsequent infection.¹ It can occur at any age but common in young people, immune compromised status and peripheral vascular disease.² The usual presentation is pain in the affected nail with progression to drainage, infection, and difficulty in walking. It results insignificant morbidity which has economic impact, secondary to decreased mobility and work absenteeism. A staging system has been developed to grade the severity of ingrown toenails.³ Stage 1 is characterized by erythema, slight

edema, and pain, particularly with pressure. Stage 2 consists of the same symptoms but of greater severity; the wound may become locally infected and start to drain. Stage 3, all signs and symptoms are amplified, and there is associated formation of granulation tissue and lateral nail fold hypertrophy.

A wide range of conservative and surgical methods are available for the treatment of Ingrown toe nail. These options include simple incision & drainage of the abscess, the partial nail excision (wedge resection), nail avulsion and radical excision (Zaddik's procedure) of the nail. But the surgical treatment only is associated with

high recurrence rate.⁴

Review of literature shows better results of complete nail avulsion and phenolization compared with other surgical options. The phenol is very irritant in nature, and so painful. Sometimes it leads to sterile abscess. While *Apamargkshara* is a herbal product and it may be a great substitute of phenol as chemical cauterization.

In this study we document a case of ingrown toenail of the great toe, which had developed a granulation mass and enveloped the nail. We describe here the chemical cauterization of the nail matrix with *Apamargkshara* after complete avulsion of nail, a treatment that had good results.

The aim of present study is the use of *Apamargkshara* after complete nail avulsion and sees the response of the treatment in order to develop some local guidelines in our scenario.

MATERIALS AND METHODS

DRUG REVIEW

The traditional drug derived from herbs, zoological product and geological or minero-chemical ones have been using for the management of the diseases of ailing persons for centuries.

Acharya Sushruta has mentioned the manufacturing methodology to prepare the *Kshara*, including pharmacological actions. The method adopted to prepare *Kshara* for this study is mainly based on the reference with regard to *Kshara* mentioned *sushruta-samhita*.⁵

The available literature of drugs used for the preparation for *Apamargkshar* in this study is briefly narrated as follows.

APAMARG

BOTANICAL NAME *Achyranthesaspera*

FAMILY *Amaranthaceae*

It is a herb, Erect 0.3 -0.9 meter high, Stern stiff, not much branched. Braches - are quadrangular, striate Leaves-few thick elliptic. Flower- greenish white, numerous. Seed-Sub cylindrical truncate at apex, round at base brown colored.

APAMARG KSHARA PREPARATION

The dried whole plant (*panchang*) of *Apamarga (Achyranthesaspera)* was used to prepare *Apamargkshara* preparation as per standard protocol.

CLINICAL STUDY

We have experienced a case of ingrown toenail of the right great toe. The patient had self-treated his ingrown toenail for a period of one year with an ointment available over the chemist. However, the granulation tissue on both sides of the nail had increased gradually and advanced over the nail plate in the medial direction. Finally, the granulation tissue on both sides had adhered to the nail and epithelial cells advanced over the granulation tissue completely.

Patient profile

A 56-year-old female Hindu patient came to our hospital complaining of pain, offensive smelling discharge and disappearance of the nail of the right great toe. Physical examination showed epithelized mass on the nail plate and fistulation from the proximal nail fold to the tip of the toe.

Surgical procedure

After disinfection of the digits with povidone-iodine solution, we anesthetized the toe with a digital nerve block using 1% lignocaine. A finger tourniquet was applied to the digit and clamped. We made a longitudinal incision roughly 7 to 8 mm extending from the edge of the nail to the distal interphalangeal joint and 3 mm proximal to the lateral nail fold, but did not raise skin flaps. After that we removed the nail using a

straight artery forceps. The excessive skin and soft tissue of the tip of the toe were excised and trimmed.

Apamargkshara was applied to the nail bed underneath the nail fold for 1 minute after the complete nail avulsion. Contact of *Apamargkshara* with the surrounding skin was avoided, and the treated area was carefully washed with lemon juice to neutralize any residual *Apamargkshara*.

After tourniquet removal, a pressure dressing with a sterile gauze pad that was left in place for 24 hours.

Follow up

After tourniquet removal, a pressure dressing with a sterile gauze pad that was left in place for 24 hours.

Results

Application of *Apamargkshara* after complete nail avulsion resulted in less postoperative pain in early postoperative period, less wound infection and decrease recurrence.

We did not find any postoperative complications or complaints about the cosmetic outcome.

DISCUSSION

Ingrown toenail deformity is a common nail pathology that causes intractable pain and discomfort, hindering normal walking and markedly decreasing the quality of life of patients. Ingrown toenails could be a cause of granulation tissue of the lateral nail fold of the finger or toe⁶. An ideal surgical technique is not currently available, but theoretically, such an approach would be technically simple cost effective and yield good cosmetic results with low recurrence rates. Furthermore, the procedure would be

done on an outpatient basis with a quick return to normal activities and low complication rates.⁷ A wide range of surgical methods are available for the treatment of Ingrown toe nail. These options include simple incision and drainage of the abscess, the partial nail excision (wedge resection), nail avulsion and radical excision (Zaddik's procedure) of the nail. But the surgical treatment only is associated with high recurrence rate.⁸ Initially the preferred treatment was simple nail avulsion (extraction) or partial nail avulsion (wedge resection) but these procedures have fallen out of favor due to the high recurrence rates.

The use of phenol was described by Ross in 1969 and is also called angular phenolization.⁹ Studies have shown that application of phenol after complete nail avulsion reduces the recurrence rate to 0–4.4%.^{10,11} Application of the phenol after partial nail avulsion chemically destroys the matrix and prevents the recurrence of the in growing toe nail.

But the phenol is very irritant in nature, and so painful. Sometimes it lead to sterile abscess. While *Apamargkshara* is a herbal product and it may be a great substitute of phenol as chemical cauterization.

CONCLUSION

Application of *Apamargkshara* after complete nail avulsion is a effective measure in treatment for ingrowing toe nail. It is very easy and less painful technique. It doesn't require any specialized equipment and hospital stay.

We recommend the application of *Apamargkshara* after complete nail avulsion for better patient outcome.



Before treatment



Apamarg Kshara application
after complete nail avulsion



Follow up after 4 month

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