



Management of *Kotha Roga* (Necrotizing Fasciitis) by Modified *Ksharapichu* (Wound Packing): A Case Report

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Abstract

The present case report was a 25-year-old male patient with severe pain at the right index finger; fever, oedema, and discharge, not having any history of surgery, hypertension, diabetes, or any systemic disorder was diagnosed with *kotha roga* (necrotizing fasciitis). Presently available treatment for this is broad-spectrum intravenous antibiotics, appropriate hydration support, and meticulous surgical debridement with regular wound packing. But because of contaminated wounds and poor prognosis, herbal therapies have a possibility to cure *kotha* as they are readily available, and inexpensive. In this case, a *kshara* formulation i.e., modified *ksharapichu* was chosen as an astringent medication to be applied locally after everyday cleaning and dressing. It was observed that *ksharapichu* acted as a debriding agent and healing as well. The case was followed up for 30 days. This study employed pretty simple criteria to gain preliminary observations on the effectiveness of this *Kshara taila* on *kotha roga*.

Keywords: *Kshara*, *Kshartail*, *Kothroga*, Necrotizing Fasciitis

1. Introduction

Necrotizing fasciitis is a type of soft tissue infection, most commonly caused by *Streptococcus* bacteria commonly known as flesh-eating bacteria, hence this disease is also known as flesh-eating disease. It destroys skin, muscles as well as subcutaneous tissue¹. It is a severe disease of sudden onset that spreads rapidly and it is correlated with *Kothroga* in Ayurveda which presents with signs like discoloration/blackishness, putrefaction, pus discharge, and foul smell². Acharya Shushrut explained *Chedana karma* (excision) followed by *Vrana Shodhan* (wound cleansing) and *Ropana* (wound healing) for better treatment outcome³. In modern science invasive treatment like debridement or even amputation along with higher antibiotics and

wound packing for a longer time is needed to treat necrotising fasciitis. So in the present work, we put our effort into treating necrotising fasciitis by *Ayurvedic* principle. In this we do not perform any invasive therapy instead we use *kshar* in a modified form called *ksharapichu* along with *Kshar taila* which performs the work of *chhedan*, *lekhan* and probably lead to the healing of necrotising fasciitis owing to its property. The procedure was simple, non-invasive, not so expensive, and with less pain as compared to other treatments.

2. Patient Information

A 25-year-old male patient came to MGAC and RC complaining of severe pain in the right index finger, fever, edema, and discharge for 7 days. He took

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treatment for the same from a surgeon but did not get any relief. He was on antibiotics and analgesics for 6 days but the pain was not relieved his surgeon told him that if he did not get relief and his condition worsened then amputation of that index finger would be necessary. Therefore, he came to MGAC and RC for further treatment.

2.1 Medical History

No history of surgery, hypertension, diabetes, or any systemic disorder.

No family history.

No psychological history.

2.2 General Examination

The patient was well oriented, air entry was equal on both sides, heart sounds were normal, per abdomen was soft, non-tender and no organomegaly was found.

2.3 Local Examination

2.3.1 Inspection

- Swelling over right index finger with wound.
- Discharge was present in the form of pus mixed with blood.
- Blackish discoloration was there.
- The nail bed was not infected.
- Slough and debris were present.

2.3.2 Palpation

- Tenderness was present (+++).
- On pressing the index finger pus mixed with blood came out in large amounts approximately 15 ml and in this way draining of pus, blood, and debris happened for the first time.

3. Investigation

The patient's haemoglobin was 13 gm%, Human Immunodeficiency Virus test was non-reactive, the Hepatitis B surface Antigen test was non-reactive, clotting time was 4 minutes 20 seconds, bleeding time was 2 min 10 seconds, random blood sugar was 80 mg/dl, platelet count was 2 lakhs and ESR was 22 mm/hr

4. Diagnosis

Kotha roga (necrotizing fasciitis)

5. Treatments Plan

- *Ksharapichu* along with *Kshara taila* application⁴

25 × 25 cm piece of cotton gauze was soaked in Guggulu (*Commiphora mukul*) Resin and then dusted with *Apamarga kshar* (alkali prepared by *Acharanthus aspera*) in a thin layer, which was then allowed to dry. This process was repeated three times. The layered gauze piece was then dipped in Guggulu resin once more, followed by a single coat of *Haridra* (*Curcuma longa*) powder, and let to dry properly. The intended *ksharapichu* was created in this manner. All the ingredients required to prepare the *pichu* were collected were authenticated by the Department of Dravyaguna MGACH and RC.

With the help of continually flowing normal saline, the lesion was carefully cleaned. After that, the *Kashara pichu* along with the *Kshara taila* was softly positioned over the lesion. After that with the help of sterile dressing material, the wound was covered and closed. The dressing was continued for 5 days after that alternate day dressing was applied for 1 month.

- *Balachurna* 5mg with 1 cup milk (two times a day).
- *Chyavanprash* 2tsf twice a day with milk.

The total process of *Ksharapichu* application and dressing is continuing for 1 month (Figures 1-6).



Figure 1. Day 1 in the prone position of the hand.



Figure 2. Day 1 in the supine position of the hand.



Figure 4. Day 5 in the supine position after *ksharpichu* application.



Figure 3. Day 10 in the prone position after *ksharpichu* application.



Figure 5. Day 30-day in the prone position.



Figure 6. Day 30 in the supine position.

6. Follow-up and Outcomes (Table 1)

Table 1. Details of outcomes in ascending order

1	Slough gradually disappeared within 5 days
2	Pus discharge gradually disappeared within 10 days
3	The pain was also gradually relieved within 10 days
4	Healing of the wound started gradually and was completed within 1 month
5	The site was completely normal within 2 months
6	No adverse reactions or recurrence were found during this therapeutic and para surgical intervention

7. Discussion

The concept of *Vrana* was created by Acharya Sushruta, the founder of surgery, in about 1000 BC. Sushruta has detailed 60 various wound care methods to achieve excellent approximation, early healing, no problems, and an aesthetic or acceptable scar⁵. Sushruta discusses a number of different types of dressing materials: *Pichu*, *Plota*, *Kawalika*, and *Vikeshika* are among them. *Pichu* was only used to clean the *Vrana* and soak the *Vranastrava* (oozing), whereas *Kawalika* was

only used to cover the wound or as a dressing pad⁶. Acharya Sushruta defines the *Kshara* as a substance with the properties of *Ksharana* (melting away) and *Kshanan* (destroying the lesion). “One who mobilizes and removes the deformed skin, flesh, etc.,” or “one who eliminates the deformed skin, flesh, etc.,” is what *Ksharana* implies. Unlike other non-surgical procedures, *Kshara karma* is a safe and easy-to-use tool. It also does not need any special knowledge. It’s less painful, has a lower risk of recurrence, and is readily available⁷. It is very successful and cost-effective, with a shorter hospital stay, making it perfect for developing nations like ours.

It has been discovered that *Kshara* is highly hygroscopic, meaning it absorbs moisture and becomes worthless if exposed to the air⁸. *Haridra* keeps *Kshara* from coming into direct touch with the air, allowing it to be stored and utilized for longer. It has antibacterial and antihistaminic effects as well⁹. There is no doubt that necrotizing fasciitis is a difficult disease to treat because it progresses very quickly and poses a high risk of death if proper, timely, and adequate medical-surgical care is not provided¹⁰. Their wounds are full of closely infected pus that smells foul, and most patients are bad enough and cannot endure the pricey treatment. Therefore, there is scope for an alternative treatment system. Since they are beneficial and are the herbs, you want in general, the ancient *Ayurvedic* texts are full of such medicines. Using references from these texts, a *Kshara* formulation was created and made accessible as a local bandage for clinical testing in a case of infamous necrotizing fasciitis. This might be because *Apamarga Kshara*, which is inherently alkaline, is present. As a result of this, they have proteolytic characteristics. In histopathological investigations, medicines have also demonstrated good wound-healing capabilities. The botanical components, particularly *Guggulu*, have wound-healing effects. *Haridra*, on the other hand, is recognized to have antibacterial properties¹¹. Therefore, bacterial burden is substantially decreased, allowing for better and faster healing, as seen by histological examination

8. Conclusion

This case report concludes that *Ksharapichu* has strong wound debridement capabilities since pain and edema

are reduced while secretion rises when *Ksharapichu* is applied. As a result, it is clear that *Kshara* followed by *Pichu* (created by *Guggulu*, *Apamarga*, and *Haridra*) is particularly effective in treating infected wounds because it has strong general wound healing qualities, has no adverse effects, is cheap and can be utilized as a local dressing material in patients with necrotizing fasciitis.

9. Informed Consent

The patient's written informed permission was obtained in accordance with the Helsinki Declaration.

10. References

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