



Case Report

Management of umbilical granuloma through chemical cauterization (*Kshara karma*)-A case studyLaxmi Narayan Tiwari ^{a,*}, M. Vijayalaxmi ^a, U. Shailaja ^a, Madan Bhandari ^b^a Department of Kaumarbhritya, Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan, Karnataka, India^b Department of Shalya Tantra, Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan, Karnataka, India

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ABSTRACT

An umbilical granuloma is a most common umbilical abnormality in neonates which occurs due to overgrowth of umbilical tissue during the healing process. In Ayurveda, umbilical granuloma can be correlated with conditions like *Pindalika* (one of the complication of improper cutting of umbilical cord) or *NabhogataArsha* (extra growth on umbilicus). Aneight-years-old male child presented with a complaint of reddish swelling on umbilicus with discharge and occasional bleeding from umbilicus since birth. On examination a single swelling on umbilicus measuring $1 \times 0.8 \times 0.5$ cm, cherry red in color with serous discharge was present. It was soft, non-tender and moist. Surrounding skin was occupied with unhealthy accumulation of chronic discharges. Under aseptic precautions, *Apamarga Pratisaraneeya Kshara* (alkaline preparation having *Achyranthes aspera* plant) was applied on the umbilical granuloma. This treatment procedure was repeated for next two days. At seventh day from the first day of the *Kshara* application, it was completely healed. Umbilical granuloma was successfully treated with *Kshara Karma*.

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1. Introduction

An umbilical granuloma is a common benign abnormality in neonates that forms from excess granulation tissue remaining at the base of the umbilicus after cord separation [1]. It presents as mild discharge from the umbilicus with red swelling protruding from the umbilicus which may have bleeding tendency [2]. The normal granulation tissue of the degenerating umbilical stump of a neonate should dissolve generally by the period of second to third week [3] but may remain in some individual. If the granuloma fails to resolve, it warrants some type of treatment otherwise it may lead to complications like local infection, bleeding etc. This condition of umbilicus has similar presentations with different other conditions like umbilical polyp, umbilical adenoma, urachal anomaly etc. and has to be ruled out prior to treatment. Common treatment modalities accepted are chemical cauterization with silver nitrate or copper sulphate, application of common salt, electrical cauterization, cryotherapy, surgical excision or ligation [3]. In Ayurveda, this condition can be correlated with conditions like *Pindalika* [4] (one of the complication of improper cutting of umbilical cord) or *Nabhogata*

Arsha (extragrowth on umbilicus). In conditions like *Arshas*, *kshara karma* is indicated which has *ksharana* (curettage) activity [5] (Fig. 1).

2. Patient information

2.1. Chief complaints

An 8 years old male child presented on OPD (Outpatient Department) of Department of Kaumarbhritya, India with a complaint of reddish swelling on umbilicus with discharge and occasional bleeding from umbilicus from birth.

2.2. History of present and past illness

According to the parents of the child the swelling was consistently present and had no known aggravating and relieving factors. He had no other past and associated illness.

2.3. Treatment history

The patient had visited nearby government hospital where it was diagnosed as umbilical granuloma. Ultrasonography report done at that hospital revealed no any congenital anomalies. According to the mother of the patient, he was prescribed with an ointment for

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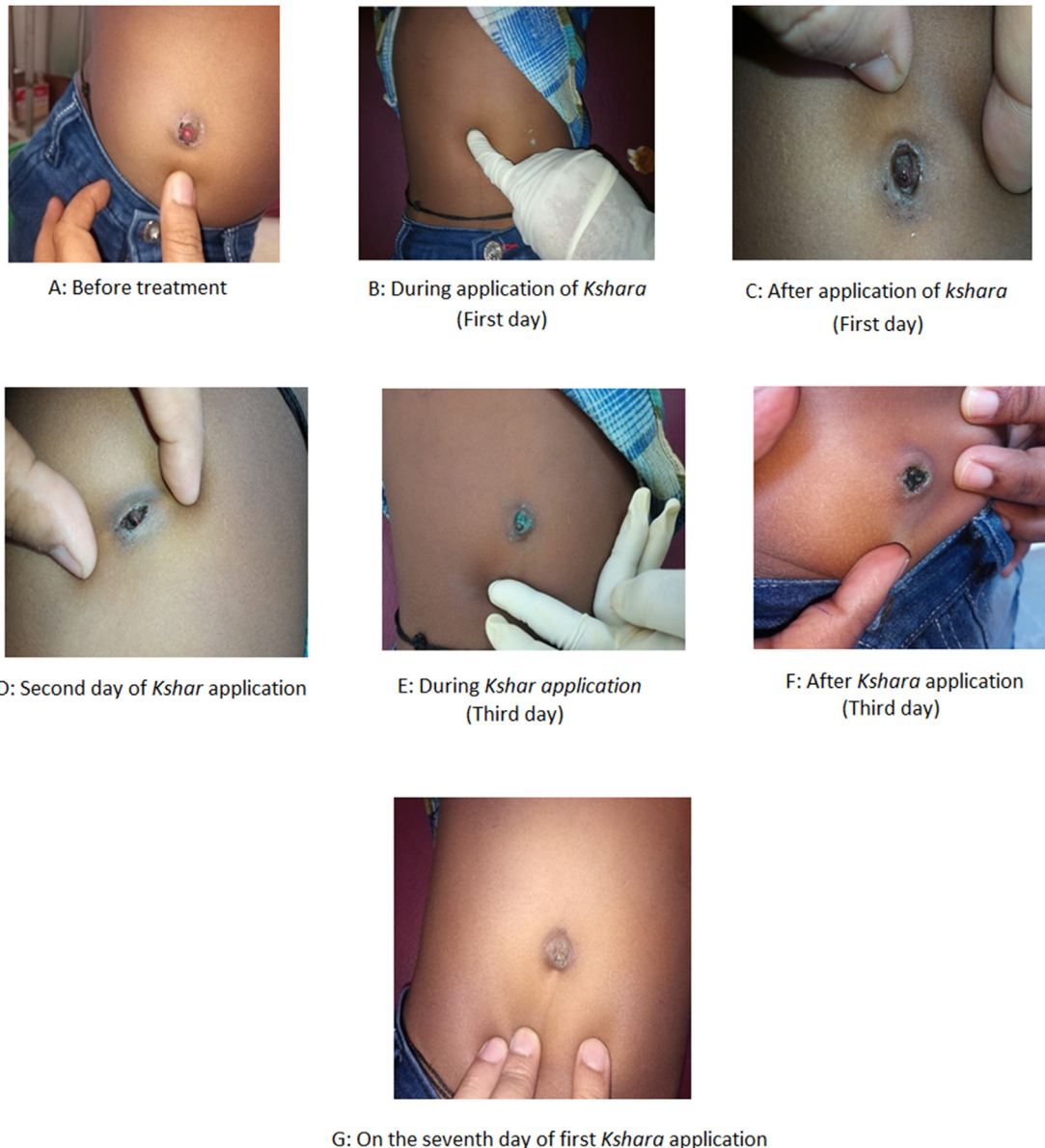


Fig. 1. Figure showing sequence (A to G) of appearance of umbilical region during treatment period. A: there is umbilical granuloma before treatment, B–F: during treatment of umbilical granuloma with application of *Kshara*, G: After treatment there is no umbilical granuloma.

application (document unavailable), which was applied for the patient but did not show any improvement.

2.4. Personal and birth history

The appetite of the patient was good, bowel and bladder habit was regular. Patient used to have sound sleep. The patient had normal vaginal delivery, cried immediately after birth. No obvious congenital anomalies.

2.5. Nutritional and immunization history

The patient was of normal built and of moderate nutritional status. He was properly immunized as per the National Immunization schedule.

3. Clinical findings

3.1. Local examination

A single swelling was present on umbilicus measuring $1 \times 0.8 \times 0.5$ cm, which had cherry red in colour with serous discharge. It was soft, non-tender and moist. Surrounding skin was occupied with unhealthy accumulation of chronic discharges.

4. Timeline

Day 1: The patient was brought to the OPD. After diagnosis and consent from parent treatment was begun. First application of *Kshara* was done.

Day 2: *Kshar* application was done on the second day.

Day 3: *Kshar* application was done. Patient was discharged from hospital.

Day 7: Patient had follow up visit of OPD and had no signs and symptoms of umbilical granuloma.

5. Diagnostic assessment

Routine blood and urine investigations were within normal range.

Ultrasonography: No sonological abnormality was noted.

5.1. Diagnosis

Based on the history and clinical presentation the case was diagnosed as umbilical granuloma (*Pindalika/Nabhigata Arsha*).

6. Therapeutic intervention

The case of umbilical granuloma was treated with Ayurvedic system of medicine. Under Aseptic precautions Ayurvedic chemical cauterization (*Kshara* application) was done with *Apamarga Pratisaraneeya Kshara* (Alkaline preparation using *Achyranthes asper* plant). *Kshara* was applied after cleaning with povidone-iodine solution and left for two minutes. Then it was washed away with normal saline. The procedure was repeated on the second and third day of the first procedure and the patient was discharged. After seven days the patient was called for follow up consultation.

7. Follow-up and outcomes

After the application of *Kshara* on the first day there was not any significant change observed except the change of colour from cherry red to blackish-brown. Mild burning sensation was complained by the patient after application of *Kshara* which was relieved after washing with normal saline.

On the second day, the size of mass was slightly reduced, mild discharges present.

On the third day, the size of mass was significantly reduced with complete cessation of discharge. Mild burning sensation was complained by the patient after application of *Kshara* which was relieved after washing it with normal saline.

On the seventh day, the mass was completely dissolved with dry surrounding area.

On the entire course of treatment no antibiotics and analgesics were prescribed to the patient.

8. Discussion

An umbilical granuloma is a common condition that can develop in a neonate's umbilical stump. It can be easily treated on outpatient basis. As this was a rare condition which was not resolved until the age of eight years and not relieved by ointment of conventional system of medicine. In Ayurveda *Kshar karma* is indicated for such type of problem. However this is not usually

done in majority of Ayurveda hospitals. In Ayurveda, such overgrowths that present at different parts of human body are considered as *Arsha* and *Kshara* application is indicated in these cases. *Kshara* by virtue of its alkalinity cauterizes the swelling and induces aseptic fibrosis after coagulating the proteins which then results in resolution of the swelling [5]. Because of the *Chedana*, *Lekhana*, *Bhedana* properties of *Kshara* the unwanted growth present in the umbilical region will be sloughed away [6].

9. Conclusion

Ayurvedic method of *Kshara karma* successfully treated a case of umbilical granuloma in an eight-years-old male child.

10. Patient's perspective

The patient and guardian were satisfied with the outcome of the Ayurvedic treatment.

11. Informed consent

The patient and the guardians were informed about the disease and Ayurvedic treatment. They provided consent for the treatment procedure.

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None.

Conflict of interest

None.

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