

Agnikarma in the Management of Kadara (Corn) - A Case Report**Sunil Roy,^{1*} K Muhiyitheen Katheeja²**

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ABSTRACT:

A corn is a horny induration of the cuticle with a hard centre, caused by undue pressure, chiefly affecting toes and feet. Almost anyone can develop a corn from poor fitting shoes to biomechanical abnormalities of the foot. It has a tendency to recur after excision. Corn can be correlated with *kadara* in *ayurveda*. In ayurveda acharya Susrutha mentioned the treatment of *kadara* (corn) by application of *Agnikarma*. The authors report a case of *kadara* (corn) who underwent *Agnikarma* treatment mentioned in *Ayurveda*. This present report describes a case of *Kadara* (corn) diagnosed as per clinical features and managed successfully by *Agnikarma* mentioned in *Ayurveda*. Clinical features were assessed before and after treatment. *Agnikarma* helped in complete recovery of *Kadara* (corn) without any undesirable scar or discolouration. The present case diagnosed as *kadara* (corn foot) and managed based on principles of *Ayurveda* showed complete recovery and formation of normal skin without any complications and remission.

KEYWORDS: *Agnikarma* , Corn, *Kadara*.

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INTRODUCTION:

A corn is a horny induration of the cuticle with a hard centre caused by undue pressure, chiefly affecting toes and feet. Almost anyone can develop a corn from poor fitting shoes to biomechanical abnormalities of the foot. Clavus and heloma are its synonyms. Although it seems to be of no major concern, skilled treatment is important in case of patients with diabetes and poor peripheral circulation since any secondary infections can lead to

the formation of gangrene [1]. In India corns and calluses occurs in 2.49% population estimated. [2] Corn has a tendency to recur after excision. It has a deep central core which reaches the deep layer of dermis. [3] It is usually white/grey/yellow in colour and is common in females.[4] *Acharya Sushruta* described clinical features of *kadara* as *Keelavat* (lesion have a central core) *Kathina* (hard), *Granthi* (knotted), *Madhyo Nimna* (depressed in the central) or *Unnata*

(elevated in the central), *Kolamatra* (seed of plum) in size, painful and sometimes with *Srava* (discharge), *Kadara* appears at soles (palm and sole according to bhoja) of a person as an outcome of vitiated condition of the *rakta* and *medas* produced by deranged *doshas* incidental to the pricking of a thorn etc or of gravel is called *kadara*.^[5] Hence Corn can be correlated with *kadara* in *ayurveda*, it is one among 44 *kshudra rogas* mentioned by *susrutha*. *Kshudra* means little, diminutive or tiny means they are less severe when compared to *mahavyadhi*. They not only mean minor but also wicked which though of a low stature frequently gives prick and embarrassment to patients. ^[6] In modern medicine treatment includes excision / local application of salicylic acid / lactic acid/ collodion / some skin softening agents. ^[7] But the results of these procedures were not satisfactory because of its high recurrence. In *ayurveda acharya susrutha* mentioned the treatment of *kadara* (corn) by application of *agnikarma* in *kshudra roga chikitsa* chapter of *susruthasamhitha*.^[8] *Agnikarma* is a procedure in which there is application of heat in affected part. There is no chance of recurrence of disease which is treated with *agnikarma* and it cures the disease which are not treated with medicine, surgery and *kshara karma*. ^[9] It is also included in *anushastra* that is parasurgical procedures ^[10]

CASE REPORT:

This is a case of 17 year old boy (op no: 21-4903) who reported to Government Ayurveda

Medical College and Hospital, Nagercoil, presenting with a chief complaint of development of a hard growth of skin over his right sole causing pain during ambulation since 6 months. Patient was apparently normal before 6 months. One day he started using tight fitting footwear which resulted in discomfort over his right sole. Later the affected part of skin thickened and hardened which gradually resulted in painful ambulation.

On local examination, the site was on the plantar aspect of the right foot at mid metatarsal region; 2cm below 2nd inter-digital space. Circumscribed grey coloured deep lesion, forming a localised painful nodule. On palpation it was hard at the centre. On deep palpation the area was tender. Hence the case was diagnosed as *Kadara* or corn foot as per conventional medicine. ^[11]

TREATMENT PROTOCOL: ^[8]

The area is cleaned with antiseptic solution, then Scalpel (Blade no: 15) is used to excise the affected part in circular shape. *Panchadhatu shalaka* is heated to red hot and placed over the excised region till completely burns out the remnants (keratin masses with intact basal layer). Kumari ^[12] (aloevera pulp) is placed over the burnt part and proper bandaging done. Patient was advised not to wet the lesion for 48 hours. Timeline of events is explained in Table 1.

Table 1: Timeline of events:

Date	Findings	Intervention	Outcome
22.04.2021	Patient diagnosed with <i>kadara</i> , corn foot in mid metatarsal of right sole.	<i>Agnikarma</i> is done using <i>Panchadhatu Shalaka</i> <i>Triphala guggulu</i> ^[13] 2-0-2 internally	Corn is successfully removed.

26.04.21	Wound is healing and dried; burning sensation due to <i>agnikarma</i> is reduced.	Using artery forceps and scalpel remnant dead tissues are completely removed. <i>Jathyadhi ghritam</i> ^[14] is applied over the wound for <i>vraṇa ropanam</i> . Advised to continue <i>Triphala guggulu</i> 2-0-2 internally.	No infection over the site.
30.04.2021	Wound is healing at a faster rate.	Dressing done with <i>Jathyadhi ghrita</i> .	Pain relieved
2.05.2021	Wound is healthy	Dressing done with <i>jathyadhi ghrita</i> .	No tenderness
22.05. 2021	Wound is completely is healed and normal skin is developed without scar.	Advised to wear footwears of correct fit and size to reduce motion of foot within the shoes.	The patient finds no pain during ambulation.

Clinical Images:



Fig-1: Kadara (Corn) in sole region



Fig-2: Excision and agnikarma



Fig-3: after 15 days



Fig-4: after one month

DISCUSSION:

Agnikarma procedure itself is aseptic so, unlike the usage of salicylic acid/corn caps which results in any infection /pain/swelling in some cases, *agnikarma* didn't bring out such complications. It has no side effects and recurrence by completely burning out the remnants. The procedure is cost effective compared to conventional methods which involves more post excision dressings and use of antibiotics and analgesics.. DR.Venhanff advocated that the place where heat burns the local tissue metabolism got improved and thus it leads to increased demand of oxygen and nutrient of the tissue. This further leads to better delivery of nutrients and more efficient removal of waste products, hence speeding up the natural process of healing.^[15] *Triphala guggulu* having *vraṇa sōpha hara* property helped in impeding the inflammation and also used to promote *vraṇa ropana* (wound healing). The recovery took place completely without any undesirable scar or discolouration. In the above case report, *agnikarma* proves to be given good results.

CONCLUSION:

The present case diagnosed as *kadara* (corn foot) and managed based on principles of Ayurveda showed complete recovery and formation of normal skin without any complications and remission.

LIMITATION OF STUDY:

The findings need to be confirmed and validated by following treatment protocol in more number of patients with corn foot.

PATIENT CONSENT:

Patients informed written consent has been taken before the procedure for *agnikarma* as well to publish the data for research.

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