



Kadara Roga: A Comprehensive Review of Ayurvedic Concepts and Contemporary Therapeutic Perspectives

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Abstract

Acharya Sushruta described '*Kadar*' as a part of *Kshudra Roga*. It is a local thickened or hardened deep-seated growth under the skin that can become painful. It is a *Vata–Kaphaj Roga* involving *Meda* and *Rakta*. It is generally correlated with the corn, a form of hyperkeratosis of the plantar and digital skin. It occurs due to injuries or friction to the sole surface, wearing of defective footwear, thorn prick, and long walking without footwear, and is found on the soles, tips of toes, and dorsal surface of the interphalangeal joints. This article draws together independently published reviews spanning 2019 to 2025 to construct a single Ayurvedic literature on Kadara, spanning conceptual reviews of its Nidana, Samprapti and Roopa, as well as modern contemporary perspectives. The review attempts to place these findings against the framework of modern podiatric understanding of corns and calluses with Ayurveda, so as to arrive at a composite picture that may be beneficial to the practising Shalya Tantra clinician.

Keywords: Kadara; Corn; Heloma; *Kshudra Roga*; *Agnikarma*; Hyperkeratosis

Introduction

Kadara is described in *Brihatrayi* and *Laghutrayi* as a *Vata-Kaphaja* disorder. Imbalance of *doshas* leads to *Medas* and *Rakta Dushti*. It has an Incidence of (14 - 28 %)² and a prevalence of 2.49% in India¹. It commonly affects darkly pigmented people, women, pedestrians, or elderly people. Diet also imparts its role in developing foot corns; especially Vitamin A deficiency leads to dry and less elastic epidermis. Ayurveda classifies *Kadar Roga* as one of the *Kshudra Roga*, meaning 'minor' or 'trivial' disease.¹¹

Kadara is considered a *Kolamathra granthi* (size of Kola), described as a hard, tumour-like or *Keela Sadrusha* (cone-shaped swelling), typically about the size of a *Kola* or *Badara* (jujube) seed. It usually occurs on the foot but also, less commonly, on the palms. It may arise from local injuries such as the prick of a thorn, contact with a stone, or the repeated pressure and friction of barefoot walking on rough ground acting upon the body. It is initially Painless but may become Painful.¹

In contemporary clinical practice, this description is almost universally correlated with the corn, a focal and intractable hyperkeratosis of the skin that develops over sites of chronic mechanical stress, most often the sole, the dorsal or lateral aspect of the toes, and the interdigital clefts. It may cause severe pain when walking, often leading to a change in the patient's gait.⁵

According to *Madhukosh*, *Kshudra Roga* is a disease occurring in children, as mentioned in the commentary.⁶

Source text	Description of Kadara
<i>Sushruta Samhita</i> (<i>Nidana Sthana</i> 13)	Included among 44 <i>Kshudra Roga</i> , <i>Kolasthi-sadrusha granthi</i> , a hard nodule the size of a <i>Badara</i> (jujube) seed, arising from thorn or stone injury; <i>Keela-Sadrusha</i> with <i>Ruk</i> and occasional <i>Srava</i> .
<i>Ashtanga Hridaya</i> (<i>Uttara Sthana</i>)	Included 36 <i>Kshudra Roga</i> , Concordant <i>Nidana</i> ; a hard, raised nodular growth on the feet or hands.
<i>Madhava Nidana</i> (Ch. 55)	Included among 43 <i>Kshudra Rogas</i> ; hard, raised nodular growth of similar description.
<i>Bhavaprakasha</i> , (<i>Gada Nigraha</i>)	Corroborate the thorn/stone-injury aetiology and the <i>Vata-Kapha-Rakta-Meda</i> s pathogenesis; specify <i>Taila</i> as the <i>Sneha dravya</i> for <i>Dahana</i> .
<i>Yogaratanakara</i> (<i>Vangasena</i>)	Hard, raised nodular growth over the feet or hands; treatment concordant with <i>Acharya Sushruta</i> .
<i>Acharya Bhoja</i> (commentary)	<i>Kadara</i> may also occur on the <i>Hastha</i> (palms), termed <i>Manaskeel</i> .

Review question

"What does the existing Ayurvedic and contemporary medical literature reveal about the etiopathogenesis, clinical presentation, and comparative efficacy of various treatment modalities in the management of *Kadara Roga*, and what gaps exist in evidence supporting an integrated multimodal treatment approach?"

Detailed Review of Ayurvedic Perspective

Nidana (Etiological Factors)

शर्करोन्मथिते पादे क्षते वा कण्टकादिभिः । मेदोरक्तानुगैश्चैव दोषैर्वा जायते नृणाम् ॥ २९ ॥
(S. N.13)

Sushruta Samhita identifies injury to the foot from a thorn-prick, a stone, or any cut wound, as well as repeated pressure sustained during barefoot walking, as the principal causative factors of *Kadara*. *Doshic* involvement is considered as aggravation of *Vata and Kapha*, acting together with vitiated *Rakta and Meda*, producing the localized skin change that follows.¹³

Factors more familiar from present-day podiatric practice include an irregular gait or faulty walking pattern, ill-fitting or excessively tight footwear, high-heeled shoes, walking barefoot without adequate protection, pre-existing structural deformities of the foot, and occupational exposure to prolonged standing or walking on hard surfaces. A history of an earlier foot injury, such as a thorn puncture, or any infection or DM or connective-tissue disease predisposes to subsequent corn formation.⁶

Samprapti (Pathogenesis)

The classical model of *Samprapti* for *Kadara* proceeds in a fairly linear sequence. Injury (*Aghata*) to the foot - whether from a thorn, a stone, or repetitive mechanical trauma - provokes aggravation of *Vata and Kapha* (*Vata-Kapha Prakopa*). These aggravated doshas in turn vitiate the *Medas* and *Rakta dhatus*, and the combined derangement culminates in the formation of a firm, *Kola*-like swelling – *Kadara*.⁷



Samprapti Ghatak⁷:

Doshas: Vata & Kapha

Dushya: Twak, Rakta, and Medhas

Agni: Jatargni: Manda

Dhatwagni: Manda

Srotas: Rakta and Medhovaha

Srotodusti Prakara: Sanga

Udbhava Sthana: Pada

Sanchara Sthana: Raktavahini sira

Roga-Marg: Bahya

Adhisthana: Pada

Modern pathophysiological studies describe it as a protective tissue response. Repeated friction or pressure over a bony prominence stimulates keratinocyte proliferation as a defence against mechanical injury. The stratum corneum thickens even as keratinocyte density within it increases, and the lamellae of this thickened layer become compacted into a hard central core that presses into the underlying dermis. In the dermis, there is degeneration of collagen fibres, proliferation of fibroblasts, hypertrophy of nerve fibres, and eventual extension of scar tissue toward the subcutaneous fat. Because the keratin plugs bear directly on the dermal nerve endings, pain occurs;

this pain is compounded whenever the lesion is confined within a tight shoe or other causes, creating a self-sustaining cycle of pressure and hyperkeratosis.

Roopa (Clinical Features)

शर्करोन्मथिते पादे क्षते वा कण्टकादिभिः ।
 मेदोरक्तानुगैश्चैव दोषैर्वा जायते नृणाम् ॥ २९ ॥
 सकीलकठिनो ग्रन्थिर्निम्नमध्योन्नतोऽपि वा ।
 कोलमात्रः सरुक् स्रावी जायते कदरस्तु सः ॥ ३० ॥
 (S. N. 13)

In *Shushruta Samhita*, *Kadara* is described with remarkable consistency as a *Keela-sadrusha* or cone-shaped lesion, *Nimna* or *Unnata Madhya* with a depressed or raised centre and hard, elevated margins. It is typically *Ruk* (pain) and may, though only occasionally, *Srava* (discharge) if secondary infection occurs¹³. *Ashtanga Hridaya*, *Madhava Nidana*, *Yogaratanakara*, and *Vangasena* each describe it similarly, as a hard and raised nodule occurring on the hands or feet. *Acharya Bhoja* additionally records its occurrence on the palms (*Hastha*), and *Sharangadhara Samhita* classifies the condition as *Krichrasadhya*, curable only with difficulty.

Classification and Modern Correlation

The term *heloma* (Greek *helus*, a stone wedge) is often used by podiatrists to denote a corn (Latin *cornu*, horn). Corns are physiological responses of the skin to chronic pressure or friction, differing chiefly in the distribution of the causative force. Predisposing factors recognised in the podiatric literature include intrinsic foot deformities and extrinsic factors such as ill-fitting footwear and repetitive high-impact activity. The condition is reported to be more common in women, in the elderly, in individuals with diabetes or peripheral neuropathy, and in those with connective tissue disorders.

Corn has 3 classifications:^{9,11}

Types of Corn	Features
Hard Corn (Heloma durum)	• Most common • Seen on the dorsolateral aspect of the fifth toe or the dorsum of the interphalangeal joints of the lesser toes or under the nail plate. • Categorized as either vascular corns (<i>heloma vasculare</i>) or neurovascular corns (<i>heloma neurovasculare</i>)
Soft Corn (Heloma molle)	• Seen between opposing surfaces of adjacent foot digits, most commonly the fourth and fifth toes. • Occurs due to maceration of the corn • Whitish-grey in colour, smooth, thin centre • Prone to secondary bacterial or fungal infection.
Seed Corn (Heloma millare)	• Seen around the heel or non-weight-bearing areas of the plantar surface. • Smaller, grow in clusters and usually painless

Differential Diagnosis

A corn must be distinguished chiefly from two conditions with overlapping presentations. A callus is typically either asymptomatic or produces a dull, diffuse discomfort likened to walking with a pebble in the shoe, in contrast to the sharp, knife-like pain a corn produces on direct downward pressure. A plantar wart, on the other hand, is characteristically tender on lateral compression, whereas a corn is more painful on direct pressure - a distinction that remains one of the more reliable bedside tests for differentiating the two. Additional differentials mentioned in the more recent literature include warty dyskeratoma, calcinosis cutis, gout/pseudogout, hypertrophic lichen planus, lichen simplex chronicus and interdigital neuroma.¹⁰

Different Treatment Modalities

System of Medicine	Treatment Modality / Method	Key Details
Ayurveda (Shalya Tantra)	<i>Bheshaja</i> (medicine)	Consists of <i>Lepana</i> (external paste application), e.g., <i>Tuthyadi Lepana</i> , due to its <i>Kaphahar</i> and <i>Lekhana</i> karma
	<i>Shastra Karma</i> (surgery)	Done through Surgical excision of corn; may have a high chance of recurrence
	<i>Kshara Karma</i> (alkali application)	Consists of <i>Chedana</i> , <i>Bhedana</i> , <i>Lekhana</i> properties; uses <i>Apamarga</i> or <i>Arka Kshara</i>
	<i>Agnikarma</i> (cautery)	Effective where <i>Bheshaja</i> , <i>Shastra</i> , and <i>Kshara</i> fail; Low recurrence due to <i>Apunarbhava Guna</i> ; Performed using <i>Dahanopakaranas</i> like <i>Pippali</i> , <i>Ajasakrida</i> , <i>Godanta</i> , <i>Shara</i> , <i>Shalakas</i> , <i>Madhu</i> , <i>Jaggery</i> , <i>Sneha</i> , done until <i>Samyak Dagdha Lakshana</i> appears
	<i>Chedana</i> + <i>Sneha Dagdha</i>	Done by lesion excision (<i>Chedana</i>), then heated <i>Sneha</i> (to smoking point) applied for <i>Dahana</i> , done until <i>Samyak Dagdha Lakshana</i> Followed by local application of <i>Ghrita</i> and <i>Madhu</i>
	(Overall observation)	<i>Agnikarma</i> shows best treatment response with lowest risk of recurrence

Modern Medicine	Topical keratolytic	Consists of salicylic acid (12.6%–40%) as pad/solution; Urea (20%–50%)
	Other topical agents	Consists of silver nitrate; hydrocolloid dressings
	Laser therapy	Includes Ablative laser (e.g., CO ₂ laser); precisely destroys and removes the hard, thickened layers of dead skin and the central keratin core through thermal vaporization and coagulation
	Surgical excision	Done through removal of central plug under local anaesthesia via elliptical incision; daily/alternate-day dressing
Siddha System <i>Kaalaani</i> (Corn)	Cauterization	<i>Uloga Suttigai</i> (heated metal probe), applied from edges inward
	Post-cauterization care	Aloe vera pulp applied to soothe the burn
	Debridement	Burnt tissue excised until healthy skin exposed
	Wound cleaning	<i>Padikaara Neera</i> (alum water)
	Dressing	<i>Matthan Thylam</i> ; daily bandaging for ~1 week until complete healing
Homeopathy	Mechanical/supportive aids	Donut-style corn caps, moleskin padding, cold packs (for pain/swelling)
	Medicines (constitutional/symptomatic)	Consists of Antimonium Crudum, Agaricus, Sepia, Silica, Lycopodium, Natrum Muriaticum, Ferrum Picricum — indicated for pricking, sticking, burning, or tearing pain, suppuration, soreness
Traditional Chinese Medicine (TCM)	Formulation 1	Consists of Angelica root, Camphor, Pinellia rhizome, Wolfberry root bark, Safflower, Chinese nutgall — powdered and mixed with sesame oil into a paste
	Formulation 2	Consists of Centipede, Leech, Mole cricket, Chinese gall, Alum, Vaseline (by weight)
	Therapeutic action	Done by removing toxins, dispels stasis, relieves pain, mildly corrodes/softens cutin

Existing Gaps and Future Directions

Challenges and Future Directions - Recurrence of corns may take months to manifest, so future studies should include a follow-up window of at least 6–12 months

Sample size and study design - Adequately powered, randomised, feasible, and blinded trials are needed before Agnikarma trials for proper study.

Standardisation of Agnikarma technique – Instrument Choice, number and interval of sittings, depth of cauterisation, and pre-treatment with Sneha should be agreed across departments of Shalya Tantra.

Patient-centred outcome measures - Almost every study checks whether the pain and swelling went down, but none of them actually measure whether the patient's quality of life or walking improved.

Special populations – Patients with diabetic and neuropathic conditions are simultaneously more prone to corn formation is a risk group throughout the literature, but are not the specific subject of any dedicated study identified.

Lack of Consolidated Literature - Literature on Kadara Roga is spread thinly across journals and scattered case reports, with no single compiled source available. This systematic review brings existing knowledge together for easier access and further research.

Conclusion

Kadara is a *Vata-Kapha* dominant *Kshudra Roga*, producing a hard, cone-shaped, often painful lesion at the pressure-bearing points of the foot. Its correlation with the corn in modern medicine is well supported by both clinical description and pathogenesis. Both trace the problem back to sustained mechanical pressure and describe the same endpoint—a thickened, keratinized lesion built around a central core—and incomplete removal of that core is the main reason the condition keeps coming back after treatment. This convergence suggests a rational basis for an integrative pathway rather than a forced hybridisation of two unrelated systems. To reduce this recurrence, one should follow some prevention, like better-fitting footwear, orthotic padding, correcting any underlying gait issue or deformity, avoiding constant pressure on the weight-bearing area, and avoiding long standing. Agnikarma used alone or after Chedana stands out as the most approachable and likely to provide lasting results. In patients with peripheral vascular disease or neuropathy, where the risk of thermal injury is higher, Kshara karma, or surgical excision followed by chemical cauterization, offers a comparable biomedical alternative. Overall, the available approaches suggest that no single treatment modality should be considered universally applicable. Selection of therapy should be individualized according to the size, site, duration, severity, recurrence, associated pain, and underlying mechanical factors. Conservative measures and keratolytic therapy may be appropriate for uncomplicated lesions, whereas resistant or recurrent lesions may require procedural intervention.

Thus, an integrative and evidence-based treatment strategy, incorporating appropriate traditional or contemporary modalities according to clinical indication, may provide a rational framework for the management of corns.

Further well-designed comparative clinical trials are needed to establish the efficacy, safety, recurrence rates, and long-term outcomes of the various traditional and modern treatment modalities, particularly *Agnikarma*, in comparison with established contemporary therapies.

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