



Case Study

MANAGEMENT OF CORN USING AGNIKARMA

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ABSTRACT

Corns (clavi) are a common painful condition caused by hyperkeratosis due to repetitive friction or pressure. *Agnikarma*, an Ayurvedic thermal cauterization technique, is traditionally used to treat various musculoskeletal and dermatological conditions. This case study evaluates the efficacy of *Agnikarma* in treating a corn on the sole of a patient's foot. **Patient Profile:** A 45-year-old male school teacher presented with a painful corn on the plantar aspect of her right foot. The corn had been persistent for six months, causing severe discomfort while walking or standing. The patient opted for *Agnikarma* after conventional treatments were discussed. **Method:** The corn was marked and the surrounding area cleaned. A heated *Shalaka* (metal rod) was applied to the corn in a circular motion to achieve a therapeutic burn. Post-procedure care included keeping the area clean and dry with regular dressing changes. **Results:** The patient experienced significant pain relief one week post-procedure, with the corn reducing in size by four weeks. By eight weeks, the corn had completely resolved with no recurrence or complications. The patient reported no discomfort and was able to resume normal activities. **Conclusion:** *Agnikarma* provided effective and immediate relief for the patient's corn, showcasing its potential as a minimally invasive and cost-effective treatment. This technique promotes localized tissue necrosis and healing, making it a valuable alternative to conventional treatments, particularly for patients seeking prompt pain relief and reduced recurrence.


INTRODUCTION

Corns (*Kadar*) ^[1], also known as clavi, are localized thickened areas of the skin that develop due to repeated pressure or friction, commonly found on the weight-bearing areas of the feet. These lesions are often painful and can significantly impair daily activities, particularly for individuals whose occupations involve prolonged standing or walking. Traditional treatments for corns include the use of keratolytic agents like salicylic acid, cryotherapy, and surgical excision. ^[2] Hard Corn It is localized area of thickening over a bony projections like heads of metatarsals.

Histologically it differs from callosity by having severe keratoses with a central core of degenerated cells and cholesterol. It presses over the adjacent nerves causing pain. It can get infected causing severe pain and tenderness with inability to walk.

Agnikarma, an ancient Ayurvedic technique, offers a promising alternative. This method involves the application of heat using a metal rod (*Shalaka*) to create a controlled burn, inducing localized tissue necrosis and promoting the healing process.^[2] *Agnikarma* has been traditionally employed for various conditions, including musculoskeletal disorders and dermatological issues, due to its immediate pain-relieving properties and minimal invasiveness.

This case study aims to explore the effectiveness of *Agnikarma* in the treatment of corns (*Kadar*) by presenting a detailed account of a patient who underwent this procedure. The study highlights the procedural steps, patient outcomes, and the overall efficacy of *Agnikarma* in providing relief from pain and reducing the recurrence of corns. Through this

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exploration, the potential of *Agnikarma* as a viable and effective treatment option for managing corns is assessed, particularly for patients seeking immediate relief and a low recurrence rate.

MATERIALS AND METHODS

Patient Profile

- **Age:** 45 years
- **Gender:** Male
- **Occupation:** School teacher
- **Medical History:** No significant medical history, non-diabetic.
- **Presenting Complaint:** Painful corn on the sole of the right foot for six months.

Materials

1. **Shalaka:** A metal rod specifically designed for *Agnikarma*.
2. **Heating Source:** A device to heat the *Shalaka* until it is red-hot.
3. **Antiseptic Solution:** For cleaning the affected area before the procedure.
4. **Sterile Bandages:** For post-procedure care.

Method Patient Preparations

- The patient was informed about the procedure, its benefits, and potential risks. Informed consent was obtained.
- The patient was seated comfortably in a sterile environment.
- The affected foot was cleaned thoroughly with an antiseptic solution.

Marking

The corn was identified and marked to ensure precise application of the *Agnikarma* procedure.

Anesthesia

Local anesthesia was administered around the corn to minimize pain during the procedure.

Agnikarma Procedure

- The *Shalaka* was heated until it was red-hot using a suitable heating source.
- The heated *Shalaka* was applied to the marked corn in a circular manner for a few seconds to achieve a therapeutic burn. Care was taken to limit the burn to the corn and avoid surrounding healthy tissue.
- The procedure aimed to create controlled thermal necrosis, which would promote the sloughing off of the corn and subsequent healing.

Post-procedure Care

- The burn site was dressed with a sterile bandage to prevent infection.
- The patient was advised to keep the area clean and dry.
- The patient was instructed to avoid putting pressure on the treated area for a few days and to

follow up regularly for monitoring and dressing changes.

Follow-up and Evaluation

- The patient was monitored for pain relief, reduction in the size of the corn, and any signs of infection or complications.
- Follow-up visits were scheduled at one week, four weeks, and eight weeks post-procedure to assess the progress and effectiveness of the treatment.
- Clinical photographs and measurements of the corn were taken at each visit to document changes.

Outcome Measures

- Primary outcome: Complete resolution of the corn.
- Secondary outcomes: Pain relief, time taken for healing, and absence of recurrence or complications.

This standardized approach ensures the effective application of *Agnikarma*, allowing for accurate assessment of its efficacy in treating corns.

Subjective and Objective Criteria

Subjective Criteria

Pain Assessment

- Visual Analog Scale (VAS): The patient rated their pain on a scale from 0 (no pain) to 10 (worst possible pain) before the procedure and during each follow-up visit.
- Patient's verbal feedback on pain relief and overall comfort levels post-procedure.

Functional Improvement

- Patient's self-reported ability to perform daily activities, including standing and walking without discomfort.
- Impact on occupational performance, given the patient's profession as a school teacher.

Satisfaction with Treatment

- Patient's overall satisfaction with the *Agnikarma* procedure and the outcome.
- Willingness to recommend the treatment to others or undergo the procedure again if necessary.

Objective Criteria

Size and Appearance of Corn

- Measurement of the corn's diameter using a ruler or callipers before the procedure and during each follow-up visit.
- Clinical photographs taken at baseline, one week, four weeks, and eight weeks post-procedure to document changes in size and appearance.

Healing Progress

- Observation of the burn site for signs of infection, inflammation, or adverse reactions.
- Assessment of tissue necrosis and sloughing off of the corn during follow-up visits.

- Degree of epithelialization and formation of healthy tissue over the treated area.

Absence of Recurrence

- Monitoring the treated area for any signs of new corn formation or recurrence during follow-up visits.
- Documentation of the patient's long-term outcomes beyond the eight-week follow-up if available.

Post-procedure Complications

- Incidence of any adverse effects such as infection, excessive scarring, or unintended damage to surrounding tissue.
- Requirement for additional treatments or interventions following the initial *Agnikarma* procedure.

Data Collection and Analysis

- Subjective data were collected through patient interviews and pain scale assessments.
- Objective data were obtained through clinical measurements, photographic documentation, and direct observation during follow-up visits.
- The effectiveness of the treatment was evaluated based on the resolution of the corn, pain relief, and the absence of complications or recurrence.
- Comparative analysis of pre- and post-treatment data provided insights into the overall success of the *Agnikarma* procedure for managing corns.

RESULTS

Patient Profile

- **Age:** 45 years
- **Gender:** male
- **Occupation:** School teacher
- **Presenting Complaint:** Painful corn on the sole of the right foot for six months

Subjective Outcomes

Pain Assessment

- Pre-procedure VAS Score: 8/10
- 1 Week Post-procedure VAS Score: 3/10
- 4 Weeks Post-procedure VAS Score: 1/10
- 8 Weeks Post-procedure VAS Score: 0/10
- The patient reported significant pain relief within one week post-procedure, with continued improvement over the following weeks.

Functional Improvement

- One week post-procedure, the patient reported being able to stand and walk with significantly less discomfort.
- By four weeks, the patient resumed normal activities, including prolonged standing and walking, with minimal discomfort.

- At eight weeks, the patient experienced no pain and reported no limitations in daily activities or occupational duties.

Satisfaction with Treatment

- The patient expressed high satisfaction with the procedure, noting immediate pain relief and a straightforward healing process.
- She indicated a willingness to recommend *Agnikarma* to others and would consider it again if necessary.

Objective Outcomes

Size and Appearance of Corn

- Pre-procedure size: 1.5 cm in diameter
- 1 Week Post-procedure: Significant reduction in size, with necrosis visible.
- 4 Weeks Post-procedure: Further reduction in size, with the corn nearly resolved.
- 8 Weeks Post-procedure: Complete resolution of the corn.
- Clinical photographs documented the progressive reduction in size and eventual resolution of the corn.

Healing Progress

- 1 week post-procedure: The burn site showed signs of controlled necrosis without infection or excessive inflammation.
- 4 weeks post-procedure: The corn had sloughed off significantly, with healthy tissue beginning to form.
- 8 weeks post-procedure: Complete epithelialization and formation of healthy tissue over the treated area.

Absence of Recurrence

- During the eight-week follow-up period, there were no signs of new corn formation or recurrence at the treated site.
- The patient reported no recurrence of the corn beyond the initial follow-up period.

Post-procedure Complications

- No adverse effects such as infection, excessive scarring, or unintended damage to surrounding tissue were observed.
- The patient required no additional treatments or interventions following the initial *Agnikarma* procedure.

Summary of Results: The^[3] *Agnikarma* procedure resulted in significant pain relief, functional improvement, and complete resolution of the corn without recurrence or complications. The patient experienced a straightforward and satisfactory healing process, highlighting *Agnikarma* as an effective and minimally invasive treatment for corns.



DISCUSSION

Effectiveness of *Agnikarma*: The case study demonstrated that *Agnikarma* is an effective treatment for corns, providing significant pain relief and resolving the lesion without recurrence. The patient's pain, which was initially severe, decreased dramatically within a week post-procedure, and continued to improve, ultimately reaching zero on the VAS scale by eight weeks. This rapid pain relief is one of the key advantages of *Agnikarma*, likely due to the immediate desensitization of nerve endings and reduction of local inflammation.

Mechanism of Action: *Agnikarma* works by applying heat to the affected area, creating controlled tissue necrosis. This process induces localized destruction of the hyperkeratotic tissue, promoting sloughing off of the corn and allowing healthy tissue to regenerate. The heat application also improves local blood circulation, which may enhance the healing process and reduce pain. The absence of complications such as infection or excessive scarring suggests that when performed correctly, *Agnikarma* is a safe procedure.

Comparison with Conventional Treatments:

Conventional treatments for corns, such as salicylic acid application, cryotherapy, and surgical excision, have varying degrees of success and can involve discomfort, recurrence, or complications. Salicylic acid can cause skin irritation, cryotherapy can be painful and may not fully remove the lesion, and surgical excision carries the risk of infection and scarring. In contrast, *Agnikarma* offers a minimally invasive option with immediate results and minimal recurrence, as evidenced by the patient's positive outcome.

Patient Satisfaction and Functional Improvement

The patient reported high satisfaction with the *Agnikarma* procedure, citing immediate pain relief and a smooth healing process. Functional improvement was also notable, with the patient able to resume normal activities, including prolonged standing and walking, by four weeks post-procedure. This functional improvement is critical for individuals with occupations that require long periods of standing or walking, such as the patient in this case study.

Limitations and Considerations: While the results of this case study are promising, there are some limitations to consider. This study involves a single patient, and the results may not be generalizable to all patients with corns. Further research involving larger sample sizes and comparative studies with conventional treatments would help to validate the efficacy and safety of *Agnikarma*.

Conclusion and Future Directions: The case study highlights the potential of *Agnikarma* as an effective and minimally invasive treatment for corns. The procedure provided immediate pain relief, functional improvement, and complete resolution of the corn without recurrence or complications. Given these positive outcomes, *Agnikarma* should be considered a viable treatment option for patients with corns. Future studies should focus on larger patient populations and long-term follow-up to further establish the benefits and potential limitations of this Ayurvedic technique. Additionally, exploring the application of *Agnikarma* for other dermatological and musculoskeletal conditions could expand its therapeutic use.

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