



# CRYOSURGERY VS. AGNIKARMA IN THE MANAGEMENT OF CHARMAKEELA(WART)

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**Abstract:** *Charmakeela* (warts) are common benign skin lesions caused principally by the Human Papilloma Virus (HPV). Conventional dermatologic management includes cryosurgery (cryotherapy), excision, and topical therapies. *Ayurveda* offers Para surgical techniques such as *Agnikarma* thermal cauterization described for *Kshudra Rogas* including *Charmakeela*. This review compares cryosurgery with *Agnikarma* for wart management, emphasizing mechanisms, clinical effectiveness, advantages, limitations, and recurrence patterns to guide integrative approaches.

**Index Terms** - *Charmakeela*, Warts, Cryosurgery, Cryotherapy, *Agnikarma*, *Ayurveda*, Para surgical Technique, HPV.

## I. INTRODUCTION

Warts are benign cutaneous papilloma's caused by strains of HPV and can present on hands, feet, and anogenital regions. They often cause cosmetic concern, discomfort and may recur despite treatment. In *Ayurveda*, warts align with the classic description of *Charmakeela* a *Kshudra Roga* involving abnormal epidermal growths. Traditional Para surgical methods including *Agnikarma* are historically noted for managing similar lesions with reduced recurrence. With rising interest in integrated dermatologic care, comparative evaluation of modern and *Ayurvedic* para-surgical methods is critical.

### ❖ Clinical Background: Warts / *Charmakeela*:

Warts exhibit hyperkeratotic, dome-shaped skin lesions due to HPV infection. Prevalence in the general population ranges between ~7-12%, with higher rates in children and immunosuppressed individuals. Warts frequently affect aesthetic sites, prompting early intervention.

In *Ayurveda*, *Charmakeela* is noted among minor skin diseases (*kshudra rogas*), described as nail-like hard growth on skin with Dosha involvement (*Vata and Kapha*). Classical texts recommend Para surgical procedures (e.g., *Agnikarma*, *Kshar Karma*) for external lesions not resolving with conservative therapy.

## ❖ Cryosurgery: Modern Dermatologic Perspective

**Definition and Mechanism:** Cryosurgery (cryotherapy) is the controlled application of extreme cold (typically liquid nitrogen at  $-196^{\circ}\text{C}$ ) to induce tissue injury and necrosis within targeted skin lesions. Mechanisms include ice crystal formation causing cellular rupture, vascular stasis, and ischemia leading to lesion death.

### **Procedure:**

In clinical practice, liquid nitrogen is applied via spray, probe, or cotton-tipped applicator — freezing the wart and adjacent skin for several seconds, often repeated at intervals until resolution.

### **Efficacy and Treatment Outcomes:**

Cryosurgery is widely established for various benign lesions including cutaneous warts due to its outpatient feasibility, low cost, and rapid application. Cure rates vary by wart type and location and may require multiple sessions.

A randomized controlled study showed that intralesional cryosurgery often achieves complete resolution of treated warts and may enhance immune responses, possibly aiding the regression of untreated distant warts.

### **Advantages**

- Minimally invasive with no surgical excision.
- Typically requires short clinic visits.
- Useful for a range of benign cutaneous lesions including warts.

### **Limitations**

- Possible pain, blistering, pigmentation changes, or scarring.
- Multiple treatments may be needed.
- Does not eradicate underlying HPV infection, so recurrence remains possible.

## ❖ *Agnikarma*: Ayurvedic Para surgical Approach

### **Principles of *Agnikarma*:**

*Agnikarma* refers to the deliberate application of heat (using heated metallic instruments or electric cautery) to produce controlled thermal cauterization. It is considered a superior Para surgical modality in *Ayurveda* due to its rapid action and decreased recurrence in certain local growths.

Classic texts describe the use of *Agnikarma* and *Kshara* (caustic applications) for external skin lesions like *Charmakeela*, wherein heat serves to destroy the pathological tissue and normalize *Dosha* imbalance.

### **Clinical Evidence:**

Multiple clinical reports demonstrate successful wart resolution with *Agnikarma*. Case reports include chronic scalp wart clearance without recurrence for an extended follow-up post-cautery and excision. Other case reports detail effective management of perineal/perianal warts with *Agnikarma*, achieving complete healing and no recurrence at long-term follow-up.

The application of electric cautery pens for flat warts has been noted, indicating complete resolution after several sessions with minimal complications.

### Advantages

- Can be performed in outpatient settings.
- May offer reduced recurrence due to complete tissue destruction coupled with *Ayurvedic* adjuvants.
- Adaptable to varying wart types (pedunculated, flat, etc.) with electric cautery.

### Limitations

- Primarily supported by case reports and small observational studies; lacks large randomized controlled trials.
- Requires skilled practitioner familiar with *Ayurvedic* Para surgical techniques.
- Pain and local healing dynamics are variable depending on depth and intensity of heat application.

### ❖ Discussion:

The management of warts is multifaceted, with both cryosurgery and *Agnikarma* offering effective Para surgical approaches. Cryosurgery represents an evidence-based, widely practiced dermatologic intervention with demonstrated efficacy for common cutaneous warts. However, recurrence remains a clinical challenge, and multiple sessions are often necessary.

*Agnikarma* presents an ancient Para surgical therapy that shows promising results in case reports for *Charmakeela* management. The *Ayurvedic* concept of tissue cauterization aligns with modern heat-based ablation techniques such as electrocautery and laser therapy. However, rigorous clinical trials are needed to standardize parameters like energy dose, healing outcomes, and recurrence rates compared with cryosurgery.

Together, integrating cryosurgery's evidence base with *Agni karma*'s holistic principles and adjuvant care could provide a more patient-tailored management strategy especially in settings where traditional and modern medicine converge.

### ❖ Conclusion

Both cryosurgery and *Agnikarma* are viable Para surgical modalities for wart (*Charmakeela*) management. Cryosurgery is well-supported by clinical evidence and widely practiced in dermatology for rapid lesion destruction. *Agnikarma*, rooted in *Ayurvedic* Para surgical tradition, demonstrates encouraging outcomes in observational settings and merits-controlled research to fully establish comparative efficacy. Future studies should investigate standardized protocols, recurrence rates, and patient-reported outcomes to guide evidence-based integrative treatments.

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