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**Original Research Article** 

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## COSMETOLOGICAL PRIMACY OF MODIFIED KSHARAKARMA OVER AGNIKARMA IN THE MANAGEMENT OF WARTS - A COMPARATIVE CASE STUDY

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#### Abstract

Warts are manifested with hyperkeratosis and acanthosis. Infection with human papilloma virus (HPV) is the most known cause of warts. It is one among the most common skin presentation, affecting 10% of total world population. They are of different types and the most known one is common warts. These are presented with elevated outgrowths over the epidermis with black dots over it. The disease is very much prevalent among school going children and young adults. It is found as a prime reason of cosmetic embarrassment and affecting the healthy social life of the patients. Ayurveda detailed the *kshudraroga* (minor disease) named *charmakeela*, which has very close similarity with warts. The classical management of wart include parasurgical procedures ksharakarma and *agnikarma*. These two are widely used by Ayurvedic practitioners in the present day. As wart is one of the major issue manifesting cosmetological distress in the affected subjects, the complete resolution of the lesion without further cosmetological problems like hypertrophied scar, hypo/hyper pigmentation at the local site are very much needed to consider in its proper management. Clearance of the local site with minimum scar, normal to skin tone with healthy epithelialisation are the best factor which determines the total effectiveness of the wart treatment. The present case observation done to analyse the effectiveness of the two parasurgical procedures, *ksharakarma* and agnikarma in Ayurveda.

Keywords : cosmetology, Wart, Charmakeela, kshara karma, agnikarma.

## **INTRODUCTION**

Cosmetology is concerned about adding aesthetic value for personality. It is a fast developing branch which opens new horizons to the concept of beauty.<sup>1</sup>There are so many cosmetic interventions in general surgical practice today. Present day surgeries are giving much importance in minimum scaring on exposed body part after operative procedures. Development of minimum invasive techniques also have benefits in cosmetological aspects. Although Ayurveda is not described cosmetology as a separate branch, the description of beauty care is scattered in the science. *Acharyas* (eminent scholars) have detailed a number of diseases which can hamper the beauty and mentioned the remedies to resolve it also.

Warts are also known as verruca plana. They are benign proliferations of the skin and mucous membrane mostly caused due to infection with human papilloma virus (HPV). Depending upon the specific subtype of the HPV affected, wart is of different clinical variables like common wart, palmar wart, cutaneous wart, flat wart, filiform wart, butchers wart etc.<sup>2</sup> It is one of the main reason of cosmetological distress and social embarrassment among world population. In 1951 lempiere stated that, - "of all the futile disorders of the skin, it would be hard to find any that are regarded with a greater contempt by the lay public and yet capable of resisting a greater variety of treatment than the group of papillary lesions commonly known as warts"<sup>3</sup>

Concept of the *kshudraroga* (minor diseases) *charmakeela* is detailed by *Acharya susrutha* have a very close clinical proximity with warts. *Charmakeela* is an *adhimamsavikara* (disease due to aggrevation of muscle tissue) developed by the vitiation of *vyana vayu* and *kapha*. They are thick, elevated nail like projections over the skin surface.<sup>4</sup>

The holistic management of wart include oral medication, external application of *kshara* (drug with caustic proprty), *agni* (thermal cautery), and *shastra karma* (surgical procedures) in Ayurveda. Oral medications are given according to the predominant *dosha* (basic humor) in the charmakeela. *Kshara*, the best among all surgical and parasurgical procedures administered in various form for the management of *charmakeela*. *Agni* is described as the superior most among all these treatment options. Because the diseases once treated with *agni* will not manifest later in life.<sup>5,6</sup> Even though all these mentioned classical treatment

modalities are still there in practice, the cosmetological superiority of the parasurical procedures *kshara* and *agni karma* are a matter for observation.

## Material and method

#### Selection of cases:

Four cases were taken for the comparison of cosmetological superiority between *kshara* and *agnikarma* among wart treatment. All the patients were attended at the salyatantra OPD, Government Ayurveda College Hospital, Tripunithura. The first patient was a 24 years old male patient with cutaneous wart over the dorsal aspect of left hand. Second patient was a 56 years old female patient with cutaneous common wart over the left lateral aspect of neck. A 22 years old female patient who was presented with a palmar wart just above the proximal inter phalangeal crease of right index finger was the selected third patient. Fourth patient was a female aged 27 years, with plantar wart just below the base of right big toe.

Among total wart cases, the first patient with cutaneous wart and third patient with palmar wart was treated with *agnikarma* using diathermy. The second female patient with wart over neck and fourth patient with plantar wart was treated with a modified form of pratisarana *ksharakarma* (external application of kshara). That is, as subcutaneous intralesional injection of *aragwadha theekshana ksharodhaka* (liquid form of potent alkali preparation of Cassia fistula Linn.).

The patients were made to observe for the next 21 days following the procedure.

Wart characteristic	Observations			
	Patient 1	Patient 2	Patient 3	Patient 4
Site of wart	Dorsal aspect of left hand above wrist joint	Left lateral aspect of neck	Above the proximal inter phalangeal crease of right index finger	Base of right big toe
Number	1	2	1	1

Table. 1. Clinical features of wart lesions

Basal diameter	0.2*0.3 cm	1) 0.3*0.4 cm	0.3* 0.2 cm	0.3*0.3 cm
		2) 0.2*0.2 cm		
Colour	Greyish brown	Dark brown	Dark brown	Dark brown
Level	Above skin	Above skin	Above skin	Same to
	level	level	level	skin level
Aspect	Rough	Rough and	Rough and	Rough and
	110 0 811	lobed	lobed	lobed
Border	sharp	Uneven	Sharp	-
Border erythema	absent	absent	Absent	absent

#### **Investigations done:**

- 1. Routine haematological investigations of Haemoglobin, CBC, ESR.
- 2. Biochemical examination of blood sugar, serum creatinine, serum calcium, uric acid.
- 3. Bleeding time.
- 4. Clotting time.
- 5. HIV
- 6. HBSAG
- 7. VDRL.
- 8. Urine- routine and microscopic examination.

For all the four patients the laboratory investigation reports were within normal limits and selected for the procedures.

### Procedure

**Kshara karma:** The patient after strict aseptic precautions made to sit on a comfortable position. *Kshara* is made to *ksharaodhaka* form by mixing 500 gm of prepared *teekshana kshara* with 2ml. distilled water. 1 ml of this solution is drawn for Intralesional *ksharodhaka* injection at the site of wart using a number 24 gauge needle. Sufficient amount of kshara is injected (0.1-0.2 ml per square centimeter of affected skin.). The patient was advised to avoid direct water contact at the site for next 3 hours.

**Agnikarma:** Patient was made to sit in a comfortable posture in sterile surrounding. Diathermy machine was connected and excision of the wart done by holding the hyper

keratinised tissues with allis forceps. Bleeding was prevented by pressure bandage after complete excision. The wound site followed by the procedure was dressed with *jatyadi gritam* till it heals completely. Patient was advised to avoid water contact at the site untill the wound heals up.

#### **Observations and Result**

Observations were done on the local site from next day after procedure onwards. The efficacy of procedure with maximum cosmetological benefits were made by observing the wound/ulcer formation, hyper or hypopigmentation and scar at the wart site.

In *ksharakarma*, there was a negligible pain at the wart site during procedure. No itching or any complicated skin reactions were noted later. Among the two patients there was no ulcer formation at the local site on observation from next day onwards. On the next day after procedure there was a dark discoloration of the wart and it became soft also. From 3<sup>rd</sup>day after the procedure onwards there was shedding of the denatured tissues gradually and its base was observed to be without an ulcer. There was simultaneous shedding and healing. The base of the lesion after shedding was almost normal without hypertrophy and hypo or hyper pigmentation. Complete shedding happened within a period of 14 days. After that on observation upto 21 days, it was found that the wart site became almost normal with healthy surrounding skin.

In *Agnikarma* the wart was treated for excision and a fresh wound was created. There was a considerable pain at the local site during procedure and no other complications were observed. Next day onwards the ulcer site with healthy granulation tissue was observed to heal properly on dressing with *jatyadi gritam*. It took 7 days for complete healing following the procedure in these cases. From 8<sup>th</sup> day onwards on observation, there was a hypertrophied scar with central hypopigmentation. By 21<sup>st</sup> day of observation the wart site presented with a moderately hypertrophied visible scar with hypopigmentation.



Figure 1: Wart on the dorsal aspect of left hand before, during and after agnikarmatreatment



Figure 2: Wart on the lateral side of left neck before, during and after ksharatreatment



Figure 3: Wart on right index finger before, during and after agnikarma



Figure 4: Wart on the base of left big toe before, during and after ksharatreatment

Table. 2. Observations of the wart lesions during treatment procedures.

	Agnikarma		Kshara karma	
Days of observation (after treatment- AT)	Pateint 1	Patient 3	Patient 2	Patient 4
First day	Wound present with healthy granulation tissue.	Wound present with healthy granulation tissue.	No visible change	No visible change
3 <sup>rd</sup> day	Healing of wound with healthy granulation tissue and mild discharge	Healing of wound with healthy granulation tissue and mild discharge	Shedding of wart from periphery	Shedding of wart from periphery
5 <sup>th</sup> day	Healing of wound without discharge	Healing of wond without discharge	More shedding of wart without visible wound formation	Extented shedding of wart withot visible wound formation.
7 <sup>th</sup> day	Compleately Healed wound	Compleately Healed wound	Sedding of wart extented to center of wart.	Sedding of wart extented to center of wart.

## 1. Wart excision/shedding of wart & wound

	Agnikarma		Kshara karma	
Days of observation	Pateint 1	Patient 3	Patient 2	Patient 4
7 <sup>th</sup> day AT.	Present with grade 1 tenderness	Present with grade 1 tenderness	No visible scar	No visible scar
9 <sup>th</sup> day	Present with reduced tenderness	Present with reduced tenderness	No visible scar	No visible scar
11 <sup>th</sup> day	Present without tenderness	Present without tenderness	No visible scar	No visible scar
15 <sup>th</sup> day	Present with mild hypertrophy	Present with mild hypertrophy	Almost repalced with normal skin	Almost repalced with normal skin
21 <sup>st</sup> day	Present with visible scar	Present with visible scar	No visible scar. Site replaced with healthy skin.	No visible scar. Site replaced with healthy skin.

## 2. Scar:

## 3. Hypopigmentation

	Agnikarma		Kshara karma	
Days of observation	Pateint 1	Patient 3	Patient 2	Patient 4
7 <sup>th</sup> day AT.	Not visible	Not visible	Absent	Absent
9 <sup>th</sup> day	Present at border	Present at border	Absent	Absent
11 <sup>th</sup> day	Present at periphery	Present at periphery	Absent	Absent
15 <sup>th</sup> day	Present at all healed part	Present at all healed part	Absent	Absent
21 <sup>st</sup> day	Present at the center part	Present at the center part	Absent	Absent

# DISCUSSION

*Charmakeela* is described as *addhimamasa vikara* of vatakapha origin. So the best type of *pratisarana kshara* can be used is *theekshana kshara*. *Kshara*, with its *ksharana* (cutting or scrapping) and *kshanana* (debridement) properties can remove the unwanted tissue growth from skin surface.<sup>7</sup> *Kshara* also possess *pachana* (ripening), *vilyana* (lysis), and *sodhana* (cleaning) properties. The *pachana* and *Vilyana* property may act on dissolving the wart by destroying the unwanted tissue growth and by *sodhana guna* the lesion site becomes clean

and healthy. At the stage the *ropana* (healing) property of *kshara* promote proper healing. *Sowmyaguna* of *kshara* may enhances the reepithelialisation with minimum scaring and healthy skin formation.<sup>5</sup>The injection method also aids the whole process without any unwanted complication of classical *pratisarana kshara karma*.

Protein lysis is the identified chemical reaction on skin surface during *kshara* application. The caustic nature of the drug may induce breakdown of the denatured cells of the wart lesion and the special characteristics of *kshara* remove the dead cells. It then promote healing with healthy epithelialisation on the site.

*Agnikarma*can pacify *vata*and *kaphadosha*. Agni have properties like *Ushna*, *Teekshna*, *Sukshma*, and *Ashukari*. When heat reaches *twakdhatu* (tissues of skin) it can produce the effect suddenly. It may act to removes the obstructions of the *srotas*. *Agni* may also increases the *dhatvagni* (metabolic aids at tissues) and cause local *ama pachana* (removel of unwanted tiissues)<sup>6</sup>.

Principles of *agnikarma* is widely used in cosmetology and advanced surgical techniques. Diathermy is one among this. This is electrically induced heat used in physical therapy and surgical procedures. It is simply the method of coagulation and cutting. When heat applied using diathermy, this will cause a very superficial burn. As subcutaneous layer can act as a thermal insulator of skin surface, only a moderate amount heatis transmitted to the deeper layers of skin. Protein coagulation is the basic mechanism happens on the burn site during diathermy<sup>8</sup>.

## CONCLUSION

As a prevalent clinical condition affecting the concept of beauty and healthy social life, the management of warts are always pointing to its complete resolution without further cosmetological issues. Ayurveda describes the treatment of *charmakeela* with conservative, parasurgical and surgical interventions. Among these the *kshara* and *agni* plays an important role. As both these treatments are in extensive use by today'sayurvedicpractitioners the cosmetological primacy of these two among wart resolution is under need to observe. The clinical observation made on four patients with 3 clinical variables of warts including cutaneous warts, palmar wart and plantar wart shows that, *ksharakarma* is cosmetologically more superior to *agnikama*. On observation, the after effect of the *kshara* treatment given features like complete shedding of the wart with minimum scar formation and healthy

epithelialisation. The lesion site was found to be replaced with almost normal skin. *Agnikarma* results in a hypertrophied visible scar formation and hyper pigmentation in these cases. Formation of ulceration at the wart site following diathermy and its management was again an issue.

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