



Research Article

TO STUDY THE EFFICACY OF *PRATISARANIYA KSHARA* IN THE MANAGEMENT OF *VISARAPA* (CELLULITIS)

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ABSTRACT

Acharya Sushruta, father of Indian surgery (*Shalya Tantra*) was well aware of importance of *Visarpa* and their management in surgical practices. Clinical features of *Visarpa* explained by *Acharya Sushruta* are very much resembles inflammatory swelling like as cellulitis. In *Ayurveda* cellulitis may be compared to *Visarpa*, it is a skin and subcutaneous tissue diseases. This skin diseases is of a particular type and its spreads very fast like snake, hence it is called *Visarpa*.

As per modern science cellulitis explained as an infection of the deeper layer of the skin and the underlying tissue. Cellulitis is characterized by an acute, diffuse, spreading, edematous, suppurative inflammation of the dermis and subcutaneous tissues. *Alepa* –poulticing applying paste of drugs etc on the *Vranashopa* is the first treatment, it is common for all kinds of swelling and very important one also. Poulticing is beneficial in unripe swellings, it mitigates the *Dosha* and relieves burning sensation, itching and pain. it is foremost in clearing the skin, muscle and blood by removing their blemishes and best to relive burning sensation, pain and itching. So keeping above assumption in mind related with *Kshara* and *Visarpa* we have planning the present study to add newer concept of *Ayurveda* regarding *Kshara* application in management of *Visarpa* to existing scientific knowledge. And hence present study entitled “To Study the efficacy of *Pratisaraniya Kshara* in the management of *Visarpa* (cellulitis)”. The present study designed as Prospective randomized control single blind clinical trial and hypothesis will be consider as *Pratisaraniya Kshara* act as a *Shoshana*, *Shodhana*, *Lekhana*, *Ropana* and *Shothahar* properties in management of *Visarpa*. On the basis of hypothesis study will be designed in 2 groups, *Pratisaraniya Kshara* (*Su.Su.11/11*) will selected for external application in management of *Visarpa* (cellulitis) in experimental group while Magsulf dressing [Magnesium Sulphate (Mgso4)+Glycerin] in control group, each group will selected 30 patients as per inclusion and exclusion criteria. On the basis of observation, data analysis will be drawn and result will be analyzes after that discussion and conclusion will be drawn accordingly.

KEYWORDS: *Pratisaraniya Kshara*, *Visarpa*, Cellulitis.

INTRODUCTION

Ayurveda is the spine of healthy life, the recent advances and researches in Ayurveda not only promoted its utility but also established its importance in medical field all over the world.

Visarpa is the most important disease in the field of *Shalya-Tantra*⁽¹⁾. All the types of *Shalya* and *Shastra karma* ultimately result into *Vrana* formation. *Vranashopa* is the preliminary stage of *Nijavrana*. Hence *Vranashopa* too occupies very significant place in surgical practice. A successful *Shalya Tantra* practitioner must possess the knowledge of effective management of *Vrana* as well as *Vranashopa*.

Acharya Sushruta, father of Indian surgery (*Shalya-Tantra*) was well aware of importance of *Visarpa* and their management in surgical practices. Clinical features of *Visarpa* explained by *Acharya Sushruta* are very much resembles inflammatory swelling like as cellulitis.

Sushruta, the father of surgery has explained *Visarpa* as *Vitiated Dosha* beginning to spread in *Twacha*, *Rakta*, *Mansa* and *Meda Dhatu* produced an inflammatory swelling. This type of swelling is characterized as a

spreadable in nature and hence known as *Visarpa*. *Visarpa* is one of the commonest clinical conditions of *Vranashopa*, which we come across in our day-to-day surgical practice. *Sthanik Shoph* is also termed as *Vranashoph*. This clinical entity is characterized by *Vedana*, *Utseda*, *Sthanik Ushma* *Vrudhi* and *Vivarnata*. The disease has three different stages as *Ama*, *Pachyamana* and *Pakwa Avastha*⁽²⁾. The sufferer experience more pain in *Ama* and *Pachyamana avastha*. Hence patients desired instant relief in these stages. The disease has to be effectively managed in *Ama* and *Pachyamana Avastha* only.

Vranashopa has three distinct *Avastha's* namely, *Ama*, *Pachyamana* and *Pakwa Avastha*. In *Pachyamana Avastha*, all the clinical features are at the peak and patient suffers from severe pain and cries for immediate relief. *Sushruta* cautions that, in this disease, the wise surgeon should not allow *Paka* to take place. If appropriate measures are taken in *Amavastha*, then the disease will progress into next stage and cause excessive loss of *Dhatu* and thus leads to grave prognosis⁽³⁾.

The basic principles of *Visarpa* management is to prevent onset of *Paka* i.e. Suppuration. To achieve this

principle of management, Ayurveda advocates two important treatment procedures namely, *Lepa Upakrama* (local) and *Raktamokshana* (General). Both these procedures are used in *Amavastha* of the disease to prevent *Paka* (suppuration) effectively.

Lepa therapy posses the qualities like instant pain relief, reduction of burning sensation and purification of blood⁽⁴⁾. These qualities of local treatment will bring the beneficial effects in the disease *Vranashopa* particularly in the *Amavastha* of the disease. Hence local therapy in the form of *Pratisaraniya Kshara* is selected in the present study. *Pratisaraniya Kshara* (*Su.Su.11/11*) is a potent *Shothahara*, *Vedanasthapaka*, *Vranashodhana*, *Vranaropana* and *Krimighna* preparation.

In *Ayurveda* cellulitis may be compared to *Visarpa*, it is a skin and subcutaneous tissue diseases. This skin disease is of a particular type and its spreads very fast like snake, hence it is called *Visarpa*.

As per modern science cellulitis explained as an infection of the deeper layer of the skin and the underlying tissue on the basis of above references we can compare cellulitis with *Visarpa*.

Cellulitis is characterized by an acute, diffuse, spreading, edematous, suppurative inflammation of the dermis and subcutaneous tissues⁽⁵⁾. Cellulitis can cause mild discomfort to severe complications like sepsis, local gangrene, necrotizing fasciitis, septicemia which can lead to fatal or death⁽⁶⁾. So it is necessary to prevent spreading inflammation in primary condition and prevents more hazardous complications in health medicine system.

Though there are several systemic anti-microbial drugs are available for management of the problem but these are not sufficient to eradicate the acute problem completely and have their own limitations⁽⁷⁾. In that way, external (local) application of some herbal drug formulation over cellulitis can also prove better' to manage the disease cellulitis.

Acharya Sushruta defined the *Kshara* which is kind of medication described in *Ayurveda* text for the management of various disorders. *Acharya Sushruta* defines the *Kshara* which destroys or clean the excessive *Doshas*. (*Ksharana* and *Kshanana*). According to preparation we can considers it to be caustics materials and after distillation are mostly alkaline in nature.

The *Pratisaraniya Kshara* is used to apply on tumour, pile, fistula in ano, and skin diseases and inflammatory skin condition. *Alepa-poulticing* applying paste of drugs etc on the *Vranashopa* is the first treatment⁽⁸⁾, it is common for all kinds of swelling and very important one also Poulticing is beneficial in unripe swellings, it mitigates the *Dosha* and relieves burning sensation, itching and pain it is foremost in clearing the skin, muscle and blood by removing their blemishes and best to relive burning sensation, pain and itching. So keeping above assumption in mind related with *Kshara* and *Visarpa* we have planning the present study to add newer concept of *Ayurveda* regarding *Kshara* application in management of *Visarpa* to existing scientific knowledge⁽⁹⁾. The present study has primarily aimed at comparing the efficacy of *Pratisaraniya Kshara* (*Su.Su.11/11*) and

Magsulf with Glycerin dressing to evolve a simple, safe and effective therapeutic procedure for the management of *Vranashopa* i.e. (*Visarpa*). And hence present study entitled "To study the efficacy of *Pratisaraniya Kshara* in the management of *Visarpa* (cellulitis)".

Materials And Method

Materials

The whole study was divided into two categories.

a. Conceptual study: In this section the detail description of *Visarpagiven* from Ayurvedic & modern point of views. Detailed review of selected drugs was incorporated.

b. Clinical study: The study was carried out in OPD & IPD of *Shalya Tantra* dept at S.V.N.H.T. Ayurved college *Rahuri*. The patient attending OPD/IPD was selected of their age, sex, history of previous disease etc. Fulfilling the criteria of selection & eligibility for study.

Plan of study

Prior to the commencement of the therapy in the selected patients, general information both of the patients and disease were made as below.

A complete history of the disease along with complaints was recorded as per the specially designed proforma for *Visarpa* disease with written consent of patient.

Examination of patient

Each and every patient was thoroughly examined according to history given by patient. Local as well as systemic examination carried out in the department. All the necessary laboratory investigations related to disease was also performed.

Consent

An informed written consent of every patient was taken before starting treatment.

Research Performa

After registration of the patient for research study specially prepared research Performa was filled up with respect to history, physical and clinical examination and investigations.

Selection Criteria

Inclusion Criteria

1. Age between 16 to 70 yrs.
2. Sex both male and female.
3. Patient having sign & symptoms of *Visarpa* (cellulitis) over lower extremities.
4. *Visarpa* within size upto 144 sq.cm.
5. Patient physically fit for Anesthesia and surgical procedure.

Exclusion criteria

1. Snake Bite.
2. *Visarpa* on face, neck, chest, abdomen, upper extremities & perineal region.
3. Cold abscess & Pyemic abscess.
4. Malnourish patient. (As per age, height & weight proportion) Bleeding disorders. (Increased B.T & C.T).
5. Patient in septicemia.

The patients suffering from systemic disease such as AIDS, Tuberculosis, Diabetes mellitus, Hepatitis-B, Malignancy, Vericose ulcer, Deep vein thrombosis, Arterial ulcer, Neurogenic ulcer, Leprosy, Pregnancy, Acute & Chronic renal failure, Jaundice & cirrhosis of liver.

Laboratory Investigation

- Haemogram
- Total WBC count
- Neutrophils
- Lymphocytes
- Eosinophils
- Monocytes
- Basophils
- Sr. Creatinine
- Blood Sugar Level
- Urine sugar
- HIV
- HbsAg

Material

The Materials required for the study are

- Pratisaraniya Kshara
- Magnesium Sulphate Powder (MgSo4)
- Glycerin.

- Normal Saline (N.S)
- Sterile Cotton Pad
- Roller cotton bandage (*Vikeshika*)

Pharmacological Name: Clarithromycin (250mg)

Market name: Clarinova.

Dosage : 250mg Bid for 5 days.

Company: Mankind Pharma.

Group A Experimental group

30 patient's of *Visarpa* was selected and treated as experimental group with local application of *Pratisaraniya Kshara* after cleaning infected part.

Group B Control group

30 patient's of *Visarpa* was selected and treated as control group with local application of magsulf dressing after cleaning infected part.

Mode of Administration

Local application of *Pratisaraniya Kshara* in *Visarpa*.

Duration of treatment: Upto 5 days.

Dose: 1 gm of *Pratiksharniya Kshara* for 1 sq. cm. once in a day according to depth and spreading area of *Visarpa* for group A.

Table 1: Ingredients of Pratiksharniya Kshara Compound

Drug Name	Family Name	Ras	Virya	Vipak	Karma
<i>Kutaja (Holarrhena Antidysenterica)</i>	Apocynaceae	Tikta, Kashaya	Shita	Katu	Varnaropak
<i>Palasha (Butea Frondosa)</i>	Leguminosaeae	Katu, Tikta, Kashaya	Ushna	Katu	Sothahar & Vedna stapan
<i>Ashwakarna (Dipterocarpus tubinatus)</i>	Dipterocarpaceae	Katu, Tikta	Ushna	Katu	Charmarog
<i>Nimba (Azadiracta indica)</i>	Meliaceae	Tikta, Kashaya	Shita	Katu	Varansodhan, Varnapachan
<i>Bibitak (Terminalia bellirica)</i>	Combrataceae	Kashaya	Ushna	Madhur	Sothahar, Vedna stapan & Rakta stapan
<i>Aaragwadha (Cassia fistula)</i>	Leguminosaeae	Madhur	Shita	Madhur	Sothahar, Vedna stapan & Kushtaghan
<i>Lodhra (Symplocus racemosa)</i>	Symploceae	Kashaya	Katu	Shita	Sothahar, Varnaropan Sankochak
<i>Arak (calotropis procera)</i>	Asclepiadaceae	Katu, Tikta	Ushna	Katu	Sothahar, Varnasodhan, Vedna stapan, Jantughan
<i>Snuhi (Euphorbia neruifolia)</i>	Euphorbiaceae	Katu	Ushna	Katu	Vedna stapan
<i>Karanj (Pongamia pinnatu pierre)</i>	Leguminosaeae	Katu, Tikta, Kashaya	Ushna	Katu	Sothahar, Kruminasak, Krumighana
<i>Apaamarga (achyrants asperium)</i>	Amaranthaceae	Katu, Tikta	Ushna	Katu	Sothahar, Vedna stapan
<i>Chitrak (Plumbago zeylanica)</i>	Plumbaginaceae	Katu	Ushna	Katu	Dhatupushti, Dipan, Strotorodhahar
<i>Sariva (Hemidesmus indicus)</i>	Asclepiadaceae	Madhur, Tikta	Shita	Madhur	Dhaprasaman, Sothahar
<i>Karvira (Nerium indicum)</i>	Apocynaceae	Katu, Tikta	Ushna	Katu	Kushtaghan, Varansodhan, Varnaropan, Sothahar
<i>Saptaparna (Austonia scholaris)</i>	Apocynaceae	Tikta, Kashaya	Ushna	Katu	Kushtaghan, Varansodhan, Varnaropan
<i>Agnimantha (Premna mucronata)</i>	Verbenaceae	Katu, Tikta, Kashaya, Madhur	Ushna	Katu	Sothahar, Vedna stapan
<i>Gunja (Abrus Precatorius)</i>	Leguminosaeae	Katu, Tikta, Kashaya	Ushna	Katu	Sothahar, Vedanahar

Pratisaraniya Kshara (experimental drug) preparation and storage

Above mentioned No.1 to 17 drugs collected in *Panchang* form and they were cut down into pieces and let

dried naturally and protected from direct sunlight and wind. When they were well dried, they were burnt. and white Ash was collected.

The white *Ash* was mixed with water (1part of *Ash* is mixed with 6 part Water) and stired well. The product was filtered from one layer of linen in first three day. Then new linen was used with old one and the product was filtered again for three days with two layer. Then new linen was used with old two and again filtered for next three day with three layers in this way they was filtered up to 21 days and then received product was kept as it is for 24 hours and formed *Ksharodaka* which was brownish grey in colored.

This *Ksharodaka* was boil on mild flame upto form paste like product which required 6 hours. Then this paste was left for cooling, in this way final product was obtained then it was pack in sterile air tight container and used for project work after standraization. Above method was carried out in the pharmacy of research institute.

For group B, well dipped gauze of magsulf was used to cover all affected areas.

Method of Group A *Pratisarniya Kshara* Application

The surgical stages of *Kshara karma* are classified,

- (1) *Purva karma*
- (2) *Pradhankarma*
- (3) *Pashchat karma*

(1) *Purva Karma*

Patient was asked to come for *Ksharakarma* on already appointed day. He should be mentally free of any type of surgical apprehension, anxiety or tension. He was asked to take light meal before *Kshara karma*. Operation theatre should be sufficiently ventilated with good light. Shave and cleaned the infected part of body. All equipments required for *Kshara karma* must be available on the surgical trolley.

(2) *Pradhan Karma*

The patient was taken on operation table. The infected part of the body was exposed, cleaned and examined carefully. Under all aseptic precautions, infected part washed by Normal saline and dry by sterile cotton pad then apply *Pratisarniya Kshara* on infected part with the cotton in artery. Then put the sterile pad to cover the part and dressing done by roll bandage to prevent the spread of *Kshara* on healthy tissue.

(3) *Pashchat Karma*

Then the patient shifted to surgical ward without mobilization of applicable *Pratisarniya Kshara*. Started oral medication tablet Clarinova 250 mg BD daily for 5 days. Post of dressing done after 24 hours.

Method of Group B Magsulf dressing application

The surgical stages for magsulf application,

- (1) Pre procedure
- (2) Procedure
- (3) Post procedure

1)Pre Procedure

The patient was *Visarpa* was examined with all vitals, the patient was inform about the procedure and after taking his permission he should undergone with following procedure. Operation Theater was ready with all required equipments, then the trolley was ready with Magsulf, Gauze piece, Roller Bandage, Sterile pad, artery

forceps, Gloves, N.S., and plane forceps. Then the patient was taken on the operation table.

2)Procedure

The infected part of the body was exposed, cleaned and examined carefully. Under all aseptic precautions, infected part washed by Normal saline and dry by sterile cotton pad then apply Magsulf on infected part with the gauze piece with artery. Then put the sterile pad to cover the part and dressing done by roll bandage to prevent the spread of magsulf on healthy tissue.

3)Post procedure

Then patient shifted to surgical ward without mobilization of affected part. Started oral medication, tablet clarinova 250 mg B.D daily for 5 days. Post of dressing done after 24 hours.

Gradation of observation parameters

A) Pain: Assessment was done by visual analog scale on the basis of VAS



Grading for Visual analogue Scale

In visual analogue scale patient can express the intensity of pain on a graph where 0 to 10 numbers are written on an axis of graph. According to number denoted by patient the readings of Visual analogue scale was graded from Grade 0 to Grade 10.

B) Local Temperature: Recorded by digital thermometer sensor

- 98.6° F and less 0
- 99.6° F 1
- 100.6° F 2
- 101.6° F 3
- 102.6° F and more 4

C) Tenderness :

- No Tenderness 0
- Tenderness on Palpation 1
- Tenderness on Touch 2
- Unable to touch 3

D) Edema

- No edema 0
- Edematous margins 1
- Pitting edema 2

E) Colour

- Bright red 0
- Red 1
- Pale white (infected slough) 2
- Black (necrosed) 3

F) Lymph node

- No enlargement 0
- Palpable 1

Palpable & Tenderness 2

Palpable tenderness but suppurated 3

Palpable tenderness mobile 4

Palpable & Fix 5

Minimum Bad Smell 1

Mild Bad Smell 2

Unpleasant Smell but tolerable 3

Foul smell which is intolerable 4

G) Amount of Strava (Discharge)

No Strava / Dry Dressing 0

Gauze is slight moist 1

After opening the bandage gauze is completely wet 2

Bandage is completely moist within 24 hours but no need to change the dressing 3

Bandage is completely moist within 24 hours and bandage is to be changed. 4

J) Dimension

Upto 36 sq.cm spread 1

36 to 72 sq.cm spread 2

72 to 108 sq.cm spread 3

108 to 144 sq.cm spread 4

K) Cellulitis Floor

Smooth Regular Floor and healthy granulation tissue 0

Smooth regular floor with slight discharge with absence of slough 1

Smooth irregular, slight discharge, less granulation tissue and presence of slough 2

Rough floor and presence of slough with moderate discharge 3

Rough irregular floor with more slough and profused discharge 4

H) Consistency of Strava (Discharge)

Absent 0

Purulent 1

Muco Purulent 2

Scanty 3

Copious 4

I) Gandha (Malodor)

Non Existence 0

Result

Statistical analysis

Table 2 : Effect of therapy on cardinal symptoms of Visarpa (cellulitis) in Group A

Cardinal Symptoms	N	Mean B.T.	Mean A.T.	S.D.	S.E.	S.E.	't' cal.	p value	Result	% Of Relief
Pain	30	2.67	0.98	0.47	0.098	0.098	17.49	P<0.001	H.S	81.17%
Local Temperature	30	02	0.13	0.42	0.05	0.05	2.18	P<0.001	H.S	84.66%
Tenderness	30	03	0.6	0.49	0.088	0.088	27.87	P<0.001	H.S	74%
Color	30	02	0.27	0.42	0.082	0.082	25.57	P<0.001	H.S	73.89%
Edema	30	02	0.3	0.47	0.079	0.079	24.67	P<0.001	H.S	63.33%
swollen glands (Lymphnodes)	07	03	0.39	0.98	0.150	0.150	7.43	P<0.001	H.S	50%
Discharge (Amount)	12	02	0.35	0.57	0.133	0.133	16.52	P<0.01	H.S	68%
Discharge (Consistency)	06	02	0.27	0.48	0.077	0.077	12.41	P<0.001	H.S	59.33%
Gandha (Malodor)	04	01	0.36	0.27	0.04	0.04	9.69	P<0.001	H.S	56.35%
Dimensions	30	2.96	0.88	0.32	0.073	0.073	18.67	P<0.01	H.S	64.33%
Cellulitis floor	06	01	0.3	0.25	0.05	0.05	7.83	P<0.001	H.S	85%
Healing rate	30	03	0.13	0.29	0.053	0.053	36.27	P<0.001	H.S	50%

Table 3: Effect of therapy on cardinal symptoms of Visarpa (cellulitis) in Group B

Cardinal Symptoms	N	Mean B.T.	Mean A.T.	S.D.	S.E.	't' cal.	p value	Result	% Of Relief
Pain	30	03	0.73	0.43	0.093	22.68	P<0.001	H.S	66.82%
Local Temperature	30	02	0.47	0.36	0.095	12.95	P<0.001	H.S.	65%
Tenderness	30	04	0.93	0.79	0.128	23.17	P<0.001	H.S	48.33%
Color	30	03	0.63	0.53	0.115	18.23	P<0.001	H.S	75.56%
Edema	30	03	0.68	0.54	0.120	17.47	P<0.001	H.S	56.66%
Swollen glands (Lymphnodes)	09	03	0.59	0.47	0.132	14.87	P<0.001	H.S	31.66%
Discharge (Amount)	09	03	0.62	0.58	0.110	19.39	P<0.001	H.S	49.15%

Discharge (Consistency)	07	03	0.48	0.31	0.062	11.29	P<0.001	H.S	39.30%
Gandha (Malodor)	07	01	0.23	0.13	0.07	9.66	P<0.001	H.S	23.33%
Dimensions	30	03	1.3	0.46	0.09	15.84	P<0.01	H.S	39.27%
Cellulitis floor	08	01	0.43	0.24	0.06	6.73	P<0.001	H.S	43.32%
Healing rate	30	03	0.9	0.69	0.137	13.59	P<0.001	H.S	37.86%

Overall effect of therapy

Table 4: Overall effect of therapy in Group A

Effect	No of Pt.	Percentage (%)
Cured	08	26.66%
Markedly Improved	16	53.33%
Improved	06	20%
Incurable	00	00

The result obtained was as among 30 patients, 08 patients (26.66%) are cured, 16 patient (53.33%) Markedly Improved, 06 patient (20%) are improved.

Table 5: Overall Age (15to30) wise effect of therapy in Group A

Effect	No of Pt.	Percentage (%)
Cured	04	13.33%
Markedly Improved	01	3.33%
Improved	00	%
Incurable	00	00

The result obtained was Age (15 to30) as among 5 patients, 04 patients (13.33%) are cured, 01 patient (3.33%) Markedly Improved.

DISCUSSION

Health has always been on topmost priority for human being since the beginning of civilization. For the purpose of healthy life, nature has gifted various resources to human beings to spend their decisive/vital life. Herbs, metals, minerals and animal products are among those resources. Uses of these sources in medical treatment are not new for this world. *Ayurveda* has shown various paths to use these resources in medical treatment since longtime year back⁽¹⁰⁾. *Sushruta Samhita* branch of *Ayurveda*, has described use of these resources in a very planned and descriptive manner by formulating various medicines to treat human diseases. *Kshara* (alkaline substances), is one among them. *Kshara* is medicament obtained from ash of one or more plants, animal and mineral products. The process of preparation of *Kshara* involves the extraction of 'Alkalies' from ash of dried plants. It is said that the diseases which are difficult to treat can be cured by *Kshara* therapy (alkaline therapy)⁽¹¹⁾. *Kshara* therapy not only minimize complication but also reduces recurrence of diseases. *Kshara* can reduce the chances of post-surgical infections due to its alkalinity. *Kshara* has the top most place in all surgical and Parasurgical measures. It can be used externally and internally according to the ailments of the body. In different text of *Rasa Shastra* number of *Kshara* are mentioned in different pharmaceutical processes to prepare formulations of metals and minerals.

Probable mode of action *Pratisarniya Kshara*

Maximum drugs of *Pratisarniya Kshara* are *Tikta Katu Rasatmak*, *Ushna Viryatmak*, *Katu Vipaki*. and *Kaphavatshamak*. The ingredients of *Pratisarniya Kshara* are quoted to be having *Shothahar*, *Vedanasthapak*, *Vranashodhan*, *Vranaropan* and *Krimighna*.

The probable mode of action of *Pratisarniya Kshara* can be described in as follows When a *Pratisarniya Kshara* is applied over the surface of skin opposite to the direction of hairs on it, through a water base, the active principles of the ingredients of *Pratisarniya Kshara* are released into water. After that, this combination enters the *Romakupa* and further gets absorbed through the *Swedavahi Strotas* and *Siramukh*.

Thereafter the absorbed material is subjected for *Pachana* by *Brajakagni* situated in *Twacha* and undergoes *Paka* and some new metabolites might be forming which pacifies. Although the standard *Pratisarniya Kshara* is used successfully in the management of *Visarpa*, the problem in its preparation and use are worth noting.

Kshara is one of the important dosage forms as mentioned in *Ayurveda* to cure various diseases like *Kushata*, *Kitibha*, *Vicharchika*, *Charmakila*, *Visarpa*, *Dadru*, *Nadi varna*, tumor, *Arsha*, *Bhagandara*, masses of wounds and *Kshara Karma* (Local Application) is one of the important surgical procedures for the treatment of *Visarpa*⁽¹²⁾. *Kshara Karma* is known from the time of extreme antiquity and are still alive nowadays. This fact testifies its efficiency in healing various kinds of illness and *Vranashopha*. Thus, *Kshara* have therapeutic as well as pharmaceutical importance, as both are the prime aspects of Ayurvedic therapy.

Pratisarniya Ksharahas Shodhan, *Ropan*, *Lekhan*, *Sandhankar*, *Rakshoghna* properties. By these properties *Pratisarniya kshara* is helpful in healing process of wound.

The *Ushna* and *Tikshna Gunas* of *Pratisarniya* drug has *Kaphavataghana* properties it helps in breaking the *Kapkvataja sanghat* and reducing the pain the *Pachan* and

Daran gunas of the drug helps in breaking the *Sanghat* of *Varnasopha* and helps in resolution and disintegration of *Varnasopha* i.e. *Visarpa*⁽¹³⁾.

- 1) It removes slough gently.
- 2) It absorbed discharge of wound & helps for healing process.
- 3) *Pratisarniya Kshara* is helpful to avoid the growth of microorganisms.
- 4) *Pratisarniya Kshara* is locally used to reduce edema.

Pratisaraniya Kshara can be consider as,

- It is act as a *Darana Karma*
- It is cheap and easily available.
- It is anti bacterial.
- It is a good deriding agent.
- It accelerates the healing process.
- It does not cause any allergic reactions.
- Available in bulk and easily.
- Less irritant.
- Having *Vranashodhana* and *Ropana* Properties.
- Having antiseptic and anti-inflammatory properties.

CONCLUSION

- The *Pratisarniya Kshara* compound has shown its role in decreasing inflammation sign with *Darana*, *Shodhana* and *Ropana* properties.
- The overall effect of *Pratisarniya Kshara* shows the 26.66% of the patients recorded a complete cure, 53.33% were markedly improved, 20 % were improved while 0% remained incurable.
- *Pratisaraniya Kshara* maintained the normal pH of Skin and prevents necrosis of the inflammatory condition i.e., Cellulitis (*Visarpa*) formation.
- *Kshara* therapy not only minimize complication but also reduces recurrence of diseases.
- *Kshara* reduce the changes of post surgical infection due to its alkalinity.
- *Pratisarniya Kshara* having *Darana* effect (I & D) in inflammatory condition i.e., Cellulitis (*Visarpa*).
- *Ksharakarma* is useful as the substituted of surgical instruments because they can be used safely on the patient who is affording surgery.
- *Pratisarniya Kshara* found to be very effective when compared with magnesium sulphate dressing in reducing swelling and in duration. This study concludes that the *Pratisaraniya Kshara* is very effective in reducing cellulitis and other related complication. It is a very cost effective method with

minimal resources, requires minimal training too, and very easy to use with little or no complications.

- The importance of *Kshara* in therapeutics as well as in pharmaceutical Procedure inspired us to explore the historical uses of *Kshara* in view to establish its importance as well as to get its clues for future scopes. So it can be concluded that *Pratisaraniya kshara* is very effective in management of Cellulitis (*Visarpa*).

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