

A COMPARATIVE CLINICAL STUDY OF *JATYADI GHRITA* AND *APAMARGA KSHAR PICHU* IN THE MANAGEMENT OF *DUSHTA VRANA* WITH SPECIAL REFERENCE TO NON SPECIFIC ULCER

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ABSTRACT

Dushta Vrana represent a significant burden to patient, health care professionals, and the health care system. In India, most of the population still reside in poor hygienic and malnourished conditions, hence the incidence of infection is more and delayed wound healing is also more common. The current treatment which is used to cure the non healing ulcer is by antibiotic, anti-inflammatory drugs, wound debridement, hyperbaric oxygenation, vacuum assisted closure, maggot therapy, etc. Many of such techniques are very expensive and also not successful in many cases. Hence there is a need of an *Ayurvedic* management to cure the non healing ulcer. In the present research has been evaluated which is free from the above mentioned drawbacks. Total 30 patients were taken and randomly divided into two equal groups.

Group A: Treated group with *Jatyadi Ghrita* for local application.

Group B: Treated group with *Apamarga kshar Pichu* for local application.

Out of which 100 % patients were cured in group A and 100% patients were cured in group B without any complications. Result was observed on the basis of subjective parameters (Pain, Itching) and Objective parameters (Discharge, Tenderness, Size, Floor and Smell) and analysed statistically. Although *Jatyadi Ghrita* and *Apamarga Kshar Pichu* both are effective in curing patients suffering with *Dushta Vrana*, but on the basis of overall effect of therapy it was found that *Apamarga Kshar Pichu* had better result than *Jatyadi Ghrita*.

KEYWORDS: *Dushta Vrana, Jatyadi Ghrita, Apamarga Kshar Pichu.*

INTRODUCTION

Wound and their management are fundamental to the practice of surgery. In the surgery of trauma, the wound is frequently the primary pathology. The science of wound healing has an exciting journey over the ages. Wound care evolved from magical incantations, potions, and ointment to a systematic text of wound care and surgery from Sushruta. *Acharya Sushruta* has described *Dushta Vrana* in *Sutra sthana 22nd* chapter "*Vranasrava Vigyaniam*" of *Sushruta Samhita*. All kinds of wounds heal quickly in persons who are disciplined (use only healthy food and behave as directed by the Physician) and treated by a good Physician; in those who are not disciplined and treated by ignorant Physician, lead to great abnormality, because of great vitiation of *Doshas*, it gets converted into *Dushta Vrana* or Non Healing Ulcer.^[1] *Acharya Charaka* has defined *Ashuddha Vrana* as foul smelling, discoloured, painful and excessively discharging condition.^[2] *Acharya Sushruta* has elaborately explained 60 types of procedures for the management of wound,^[3] to achieve good approximation, early healing, without complications, and acceptable scar. *Kshar karma* is the one among them. *Kshar* has *Chedana* (excision), *Bhedana* (*Incision*) and *Lekhana* (scrapping) properties along with *Tridoshahara* (Equilibrium of *Vata, Pitta* and *Kapha*) properties.^[4] Number of drugs are broadly classified into *Vrana shodhana* (purification) and *Ropana* (process which stimulate the healing process) for the management of wound. Process of *Shodhana and Ropana* have been therapeutically grouped in different forms as *Kashaya* (decoction), *Varti* (Suppository/Lint/Plugs), *Kalka* (paste form), *Sarpi* (medicated *Ghrita*), *Taila* (medicated oil), *Raskriya* (concentrated decoction), *Avachoorana* (dusting of drugs).^[5] Among these, local application of Medicated *Ghrita* (*Sarpi*) is one of the most important Upakrama for *Dushta Vrana*.

MATERIALS AND METHODS

AIMS AND OBJECTIVES

- To evaluate the efficacy of *Jatyadi Ghrita* in the management of *Dushta Vrana*.
- To evaluate the efficacy of *Apamarga Kshar Pichu* in the management of *Dushta Vrana*.
- To compare the efficacy of *Apamarga Kshar Pichu* with *Jatyadi Ghrita* in the management of *Dushta Vrana*.
- To find out any adverse effect of *Jatyadi Ghrita* and *Apamarga Kshar Pichu* on *Dushta Vrana*.

Selection of patients

Patients with sign and symptoms of *Dushta Vrana* attending the O.P.D of P.G. Department of Shalya Tantra, *Rishikul Campus, Haridwar, Uttarakhand Ayurved University*, were selected.

Plan of Work

Table No. 1.

Formulation	<i>Jatyadi Ghrita</i>	<i>Apamarga Kshar Pichu</i>
Preparation of Drugs	<i>Ghrita</i>	<i>Kshar Pichu</i>
Mode of Administration	Locally	Locally
Dose	As per size of wound	As per size of wound
Duration of Treatment	Maximum up to 6 months	Maximum up to 6 months

Observation During Treatment: At an interval of 15 days till the Ulcer heals completely.

Duration of the Treatment

- All the cases were treated till the Ulcer heals completely. Maximum duration of study was taken Six Months.

Follow up Period

- Follow up was done weekly once for one month then monthly once for two months after the completion of treatment.

Proforma- An elaborative case taking proforma was specially designed for the purpose of incorporating all aspects of the disease on *Ayurvedic* and modern parlance. Written informed consent was taken from all the registered patients for the trial.

Criteria for diagnosis of *Dushta Vrana* - Patients were diagnosed on the basis of clinical features, physical examination and lab investigation findings.

Investigations

Blood Examinations

1. Total and differential leukocyte count, Hb%, ESR, Blood sugar estimation (FBS & PPBS), LFT, RFT, Lipid Profile, HIV and HBsAg, HCV Screening, Any other (if required).

2. Other Examinations: Urine – Routine and Microscopy, Stool – Ova and Cysts, Pus for Culture & Sensitivity (if required), Histopathological examination (whenever necessary), FNAC of regional lymph nodes.

Assessment Criteria

The clinical trial was assessed for its efficacy on the basis of following subjective and objective criteria.

I. Subjective Criteria: 1. Pain 2. Itching

II. Objective Criteria: 1. Size of wound 2. Tenderness 3. Smell 4. Floor 5. Discharge

Subjective and Objective criteria were assessed with the help of following scoring pattern:

Table No. 2: Grading For Assessment of Pain.

GRADE	PAIN
0	No Pain.
1	Localised pain during movement, but not during rest.
2	Localised pain during rest but not disturbing the sleep because of it.
3	Continues pain radiating not relieved.

Table No. 3: Grading for Assessment of Itching.

GRADE	ITCHING
0	No itching
1	Slight, localized itching sensation.
2	More, localized & often itched but not disturbs sleep.
3	Continuous itching which disturbed the sleep.

Table No. 4: Grading for Assessment of Discharge.

GRADE	DISCHARGE
0	No discharge
1	Scanty occasional discharge.
2	Often discharge with blood on dressing
3	Profuse, continuous discharge

Table No. 5: Grading for Assessment of Tenderness.

GRADE	TENDERNESS
0	Tolerance to pressure
1	Little response on sudden pressure
2	Wincing on face on super slight touch
3	Resists to touch

Table No. 6: Grading for Assessment of Size.

GRADE	SIZE
0	No discontinuity of skin/ mucous membrane
1	< 5cm ²
2	5 cm ² -10 cm ²
3	>10 cm ²

Table No. 7: Grading for Assessment of Floor.

GRADE	FLOOR
0	Smooth regular healthy granulation tissue
1	Smooth irregular with less granulation tissue
2	Rough irregular with moderate discharge, firm scar
3	Rough irregular with profuse discharge, hard scar

Table No. 8 Grading for Assessment of Smell.

GRADE	SMELL
0	No Smell
1	Bad Smell
2	Tolerable unpleasant
3	Foul Smell which is intolerable

Table No. 9: Overall Effect of Therapy.

Result	Criteria
Healed	100% relief in sign & symptoms.
Markedly Healed	76-99% relief in sign & symptoms.
Moderately Healed	51-75% relief in sign & symptoms.
Mild improvement	26-50% relief in sign & symptoms.
No change	< 25% relief in sign & symptoms.

OBSERVATION AND RESULT

- ❖ Maximum patients (43.33%) were found in Age group of 51-60 years.
- ❖ Maximum patients (83.33%) were Male.
- ❖ Incidence was highest (80%) in patients from Urban areas.
- ❖ Maximum number of patients belonged to Hindu religion (93.33%).
- ❖ Majority of patients were Uneducated (40%).
- ❖ Maximum number of patients belonged to Lower class family (46.66%).

- ❖ Maximum patients were Married (86.66%).
- ❖ Maximum patients were in Labourer (73.33%) followed by service (10%).
- ❖ Maximum patients were having no Family history of the disease (90%).
- ❖ Maximum patients were having moderate Appetite (53.33%).
- ❖ In the present study 66.67% patients were having Mixed diet.
- ❖ 56.67% patients were having Irregular bowel habit.
- ❖ Maximum patients were having Disturbed sleep (56.66%).
- ❖ Maximum patients were addicted to Smoking (63.33%).
- ❖ Majority of patients were of *Vaata pitta prakriti* (50%).
- ❖ Maximum number of patients were having Poor hygiene (83.33%).
- ❖ Maximum number of patients were having Irregular shape of Vrana (40%).
- ❖ Maximum number of patients were having Single Vrana (70%).
- ❖ Maximum number of patients were having Chronicity of Vrana > 2 month (66.66%).
- ❖ Maximum number of patients were having *Nija Vrana* (86.66%).
- ❖ Maximum number of patients were having severe pain (46.66%), moderate Itching (36.66%), Purulent discharge (56.66%), mild tenderness (36.66%), no granulation tissue (63.33%),
- ❖ Maximum number of patients were having > 10 cm Size of Vrana (60%), Foul smell (53.33%).
- ❖ Maximum number of patients (83.33%) were having Vrana in Lower limb.

Group A (*Jatyadi Ghrita*)

- 1- On assessment of Subjective parameters- provided significant relief in Pain (93.8%) and Itching (98.37%).
- 2- On assessment of Objective parameters- *Jatyadi Ghrita* provided significant relief in Discharge 94.2%, Tenderness 96.7%, Size 84.3%, Floor 86.2% and Smell 96.2%.

Group B (*Apamarga Kshar Pichu*)

- 1- On assessment of Subjective parameters- provided significant relief in Pain (90.7%) and Itching (100%).
- 2- On assessment of Objective parameters- *Apamarga Kshar Pichu* provided significant relief in Discharge 96.7.2%, Tenderness 98.8%, Size 88.4%, Floor 89.2% and Smell 98.7%.

Effect of therapy on subjective criteria in 15 patients of *Dushta Vrana* (Group A)**Table No. 10**

Symptoms	Mean Rank		Friedman's Test	P-Value	% Effect	Result
	BT	AT				
Pain	12.60	0.79	152.117	0.000	93.3	HS
Itching	11.83	0.21	142.169	0.004	98.37	HS

Effect of therapy on objective criteria in 15 patients of *Dushta Vrana*(Group A)**Table No. 11**

Symptoms	Mean Rank		Friedman's Test	P-Value	% Effect	Result
	BT	AT				
Discharge	12.10	0.70	141.271	0.000	94.2	HS
Tenderness	12.77	0.43	141.214	0.000	96.7	HS
Size	12.10	1.90	163.127	0.000	84.3	HS
Floor	12.87	1.77	126.166	0.000	86.2	HS
Smell	11.40	0.43	112.164	0.000	96.2	HS

Effect of therapy on subjective criteria in 15 patients of *Dushta Vrana* (Group B)**Table No. 12**

Symptoms	Mean Rank		Friedman's Test	P-Value	% Effect	Result
	BT	AT				
Pain	12.80	1.19	172.716	0.000	90.7	HS
Itching	12.77	0.00	151.724	0.000	100.0	HS

Effect of therapy on objective criteria in 15 patients of *Dushta Vrana*(Group B)**Table No. 13**

Symptoms	Mean Rank		Friedman's Test	P-Value	% Effect	Result
	BT	AT				
Discharge	12.90	0.42	162.161	0.000	96.7	HS
Tenderness	12.67	0.15	151.915	0.000	98.8	HS
Size	11.47	1.33	171.142	0.000	88.4	HS
Floor	12.73	1.37	173.210	0.000	89.2	HS
Smell	12.87	0.17	151.521	0.000	98.7	HS

Showing Analysis of Variance in Group A and Group B**Table No. 14**

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value	Result
Pain	Group A	15	12.90	193.50	73.500	0.055	NS
	Group B	15	18.10	271.50			
	Total	30					
Itching	Group A	15	13.23	198.50	78.500	0.139	NS
	Group B	15	17.77	266.50			
	Total	30					

Discharge	Group A	15	13.50	202.50	82.500	0.171	NS
	Group B	15	17.50	262.50			
	Total	30					
Tenderness	Group A	15	14.90	223.50	103.500	0.683	NS
	Group B	15	16.10	241.50			
	Total	30					
Size	Group A	15	15.50	232.50	112.500	1.000	NS
	Group B	15	15.50	232.50			
	Total	30					
Floor	Group A	15	11.37	170.50	50.500	0.005	Sig
	Group B	15	19.63	294.50			
	Total	30					
Smell	Group A	15	14.43	216.50	96.500	0.483	NS
	Group B	15	16.57	248.50			
	Total	30					

- 3- On inter-group comparison by Mann-Whitney U test for Pain, Itching, Discharge, Tenderness, Size and Smell P value is >0.05 which is not significant. But in Floor Criteria P value is < 0.05 which is Significant. According to percentage there is some difference between group A and group B.
- 4- Group A is more effective in criteria of Pain, than group B.
- 5- Group B is more effective in criteria of Itching, Discharge, Tenderness, Size, Floor, and Smell than group A.
- 6- All the patients of both group were cured (100%)
- 7- None of patients were observed unchanged in the trial groups.
- 8- No recurrence was observed during the follow up.
- 9- All 30 patients completed their follow up period and no patient was reported with recurrence.
- 10- No side effects were reported during the study period.

DISCUSSION

The main purpose of the management of wound is to prevent the infection and promote rapid healing. There are some other factors like reducing pain, discharge and less discolouration etc., which are also very important after healing.

Complete assessment of all patients was done by using various standard statistical methodology with each and every follow up.

Following discussion is made after complete assessment.

Table No. 15: Probable mode of action of *Jatyadi Ghrita*.

S.N.	DRUG	ACTION
1.	JATI ^[6]	Vranaropana, Shothghna, Tridoshghna, kanduhara, krimihara
2.	NIMBA ^[7]	Twakdoshhara, Vranashodhak, Vranaropak, krimihara, Kushthghna
3.	PATOL ^[8]	Vranaropana Vishghna
4.	DARUHARIDRA ^[9]	Vranaropana, Shothghna, Twakdosshahara,
5.	HARIDRA ^[10]	Raktashodhak, Twakdosshahara, Vishaghna,
6.	KARANJA ^[11]	Shothghna, Raktastambhana, Krimighna, Vedanahara.
7.	KATUROHANI ^[12]	Krimihara, kanduhara, kushthghna, dahanashak.
8.	MANJISHTHA ^[13]	Twakdosshahara, Shothahara, Rakta shodhak
9.	YASHTIMADHU ^[14]	Shothahara, Vishhara, Varnya, sandhakara, Vranaropak
10.	USHEER ^[15]	Dahashamak, Stambhak, Krimihara, kanduhara, kushthghna,
11.	SARIVA ^[16]	Twakdosshahara, Raktashodhak, Varnya, sandhakara
12.	SIKTHA ^[17]	Vishhara, Varnya, sandhakara, Vrana ropana, krimihara,
13.	TUTTHA ^[18]	Vrana ropana, krimihara, kanduhara, mamsa lekhana
14.	GO-GHRITA ^[19]	Sandhakara, Vrana ropana, Vishhara, Varnya

- *Kushthghna, kanduhara, krimihara* properties are due to *kashaya rasa* of *Jati*.
- *Krimihara, kanduhara, kushthghna, dahanashak* properties are due to *Tikta rasa* of *Nimba, Haridra, Daruharidra, Katuki* and *Usheer*.
- *Vrana ropana, krimihara, kanduhara, mamsa lekhana* properties are due to *katu rasa* of *Patol* and *Tuttha*.
- *Rakta shodhak* property is due to *Tikta rasa* of *Katuki*. *Vishhara, Varnya, sandhakara* properties of *Manjishtha* and *Yasthimadhu, sariva, siktha* and *Go-ghrita*.
- *Shoth-har* property is due to *Ushna Virya* present in *Jati, Patol, Haridra, Daruharidra, Manjishtha, Karanj* and *Tuttha*.

Table No. 16: Probable mode of action of *Apamarga Kshar Pichu*.

S.N.	DRUG	ACTION
1.	APAMARGA ^[20]	Krimihara, vishara, Kanduhara, Kushthghna, Lekhana, Shoolprashmana, Shothhara, Vrana ropana,
2.	GUGGULU ^[21]	Kushthghna, Vrana ropana, mamsa lekhana, Sroto vivarana, kanduhara
3.	HARIDRA ^[22]	Raktashodhak, Twakdosshahara, Vishaghna, Shothhara, Vrana ropana.

- *Krimihara, vishhara, Kanduhara, Kushthghna, Lekhana* properties are due to *Tikta rasa* of *Apamarga, Haridra* and *Guggulu*.

- *Shoolprashmana* property is due to *Ushna virya* present in *Apamarga kshar*, *Guggulu* and *Haridra*.
- *Shothhara* activity is due to *Tikta*, *Katu rasa*, and *Rukshna guna* present in *Apamarga*, *Guggulu* and *Haridra*.
- *Vrana ropana*, *mamsa lekhana*, *Sroto vivarana*, *kanduhara* properties are due to *Katu rasa* present in *Apamarga*, *Haridra*, and *Guggulu*.

CONCLUSION

The study suggest that *Jatyadi Ghrita* and *Apamarga Kshar Pichu* both are effective in curing patients suffering with *Dushta Vrana*.

- ☆ But on the basis of overall effect of therapy it was found that *Apamarga Kshar Pichu* had better result than *Jatyadi Ghrita*.
- ☆ So, here it can be concluded that *Jatyadi Ghrita* and *Apamarga Kshar Pichu* possesses the high efficacy in *Vrana Shodhana* and *Vrana ropana* with fine scaring without producing any adverse effect and relief in signs and symptoms of *Dushta Vrana*. So it can be recommended as a cost effective, and used as an alternative approach for management of *Dushta Vrana*.

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