Comparative Evaluation of *Siravyadha* (Venepuncture) and *Shringavacharana* (Horn Application) in the management of *Vicharchika* w. s. r. Eczema

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Abstract

Skin disorders are efficiently treated in *Ayurveda* by remedial and parasurgical methods. *Vicharchika* is a type of *Kshudra Kushta*; a chronic disease analogous to eczema in modern medical science. As per contemporary science, accessible treatment for eczema consists of reassurance, elimination of predisposing factors, local medicaments, steroids and palliative measures. *Raktamokshana* (Blood letting) is one of the explicit modalities of *Shodhana* (purification) in skin disorders as it involves removal of vitiated *Pitta* & *Rakta*. In the present study, two *Raktamokshana* modalities, i.e. *Siravyadha* (Venepuncture) and *Shringavacharana* (Horn Application) were applied with convenient approach and compared for their efficacy in the management of *Vicharchika*. In the study, total 62 patients were registered and divided into two groups. In group A, 30 patients were treated with *Siravyadha* and in group B, 32 patients were treated with *Shringavacharana*. A newly designed innovative *Shringavacharana Yantra* with vacuum pump was utilized in the respective group. For assessment of result, Wilkoxan sign rank test, paired and unpaired t test were used. Both the groups showed highly significant resultas. The study supports that *Siravyadha* is the best form of *Raktamokshana* than *Shringavacharana* due to its efficacy, Cost effective and easy approach.

Keywords: Vicharchika; Eczema; Shringavacharana; Siravyadha.

Introduction

In Ayurveda, skin disorders are dealt very comprehensively with medical and surgical methods. *Vicharchika* is a disease emphasized by Ayurvedic classics under the heading of *Kshudra Kushta*[1] and it is similar to eczema in modern medical science[2]. Ayurveda

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classics advocate several lines of conventional treatment for Vicharchika[3]. In Vicharchika, the dominant Dosha involved is Pitta and Kapha whereas Dushya are Rakta and twak[4]. In this regard, many ancient acharyas have suggested various Bahya (local application) and Abhyantara (oral) medicinal treatments viz. Churna (Powder), Vati (Tablet), Kashaya (Decoction), Avaleha (Herbal Jams), Ghrita (Ghee), Taila (Oil), Bhasma (Ash form), Rasa (of mineral origin) preparations etc. These conservative treatment modalities have limited results, because the factors that are responsible for manifesting this disease are primarily Raktadushti (vitiation of blood) which are not entirely rectified by medications alone. It is clearly stated by Acharya Sushruta that the diseases which do not respond to various medical treatments definitely originate through vitiation of blood[5]; so these

disorders should be treated by *Raktamokshana* (Blood letting therapy).

The existing treatment in contemporary science for eczema consists of reassurance, elimination of predisposing causes and palliative measures. It is also said that no specific medication can cure eczema, though few drugs give symptomatic relief[6]. Contemporary dermatology employs systemic and local administration of steroids for the management of eczema[7]. Despite an initial response, maintenance therapies with small doses of systemic and topical glucocorticoids usually produce hazardous ill-effects[8]. Similarly, electrotherapy, ultraviolet therapy, hydrotherapy, X-ray therapy, etc. Have their own limitations and these therapies are neither popular nor clinically responsive.

Blood letting is an efficient and safe remedy for the Vicharchika, as the causative factor for Vicharchika is Rakta dushti. Sushruta Samhita details practical guidelines for blood letting which is considered half treatment (Ardha chikitsa)[5]. The Siravyadha is also considered to be the half or just sometimes the complete treatment (depending upon the condition) in Shalyatantragata vyadhies as Bastikarma is considered for the *kayachikitsagata vyadhies*[5]. Various methods are employed for blood letting: Shringa (Horn application), Jalauka (Leech), Alabu(Gourd), Prachhana (Scratching) and Siravyadha (Vein puncture). This therapy is very well advocated in all Ayurvedic texts. In fact, several clinical works have been done in this field, but it is the need of the hour to focus on the Raktamokshana therapy to replenish it so that a concrete statement can be made as to which modality helps in which stage of the Vicharchika. Raktamokshana is a unique parasurgical measure indicated in various diseases where predominance of Rakta and its gross vitiation is present. Sushruta, the legend in ancient Indian surgery, describes the physiological and pathological role of Rakta and its importance in surgical and parasurgical procedures. Raktmokshana is also indicated for treatment of various skin disorders Kustha[9]. A surgeon should make use of his yukti according to his experience

(Yathabhyasa) to select the disease as well as the patient. Raktamokshana should be done according procedures to the (Yathanayaya)[10]. As per the diseases, Acharyas have indicated different sites for Siravyadha[11]. In case of vicharchika, siravyadha should be performed two angulies (one Angula - a finger breadth aprox.1.95cm) above the kshripa marma[11]. Shringavacharana should be done in Twaksthitha dosha[12]. Sushruta emphasize guna of Shringa are madhra, Ushna & snighdha consequential act as Vatghna in nature[13]. Shringavacharana procedure mentioned classically is by applying the hollow cow horn on the diseased part and sucking with mouth from the other narrow end. This proposed study was undertaken to evaluate the efficacy and to standardize Siravyadha and Shringavacharana methods of Raktamokshana in Vicharchika.

The objective of the study was

To evaluate the comparative efficacy of *Siravyadha* (Venepuncture) and *Shringavacharana* (Horn Application) in the management of *Vicharchika* w. s. r. Eczema

Material and methods

Study Design

Randomized, open clinical research at OPD/IPD levels with appropriate samples. The patients included in the clinical trial were divided into two groups.

Materials

- 1) Patients Total 62 patients were divided into two groups: 30 in Group A & 32 in Group B.
 - 2) Raktamokshana Devices:
- a. Siravyadha 16 no needle, tourniquet, measuring cup
- b. Modified *Shringa* instrument- optic fibre tube attached with vacuum pump and pressure regulator.

Group A

Treatment of *Vicharchika* (Eczema) with *Siravyadha* (vein puncture)

Group B

Treatment of *Vicharchika* (Eczema) with *Shringavacharana* (Horn application)

The Cases of *Vicharchika* (eczema) were selected randomly irrespective of their age, sex, religion, occupation, caste, creed etc. and were randomly assigned in both groups from OPD & IPD Department of Shalyatantra I.P.G.T. & R.A. Hospital, Gujarat Ayurved University, Jamnagar.

Inclusion Criteria

- 1) Patients presenting with classical sign and symptoms of *Vicharchika* (eczema) like *Kandu, Vaivarnyata, Strava, Shotha, Vedana, Pidaka* etc.
- 2) Patients between the age group 10-70 years

Exclusion Criteria

- 1) Use of systemic antibiotics or anti-mycotic drugs in the previous four weeks.
- 2) Known cases of AIDS (HIV Positive), Tuberculosis, Anemia and Cardiac Diseases, Leprosy, Hepatitis A, B, C.

Laboratory Investigations

1) Routine hematological investigations RBS, TLC, DLC, Hb%, ESR & PCV, L.F.T., R.F.T, Lipid Profile

2) Urine examination

Macroscopic and Microscopic

Methodology

Group A

Modality Siravyadha

Frequency One sitting per week

Period of trial 30 days (4 week)

Diet To follow appropriate diet

Procedure

Patients were given bahya abhyanga and Nadi Swedan karma on affected part before procedure. The selected vein was elevated by application of tourniquet (Crepe bandage). Vein was punctured with broad gauze 16 no. disposable needle and allowed to bleed upto spontaneous remission which was average two minutes. The wound was dressed after haemostasis.

Group B

Modality	Shringavacharana
Frequency	One sitting per week
Period of trial	30 days (4 week)
Diat	To follow ammunuista dist

Diet To follow appropriate diet

Procedure

Patients were given Bahya Abhyanga and Nadi Swedan karma before procedure and 25 small incisions were made at or near the lesion. The innovated Shringa was applied from its base over the incised point. The Shringa was fixed by pressing it over the skin. The suction was made from the apex of Shringa with vacuum pump with constant 250 mm of Hg pressure. The created vacuum in the Shringa removed the vitiated blood upto average 27ml. After completion of the procedure the wound was dressed with antiseptic dressing after haemostasis.

Advice¹⁴

Do's

- 1) Laghu ahar (Light Digestive food)
- 2) Light Exercise
- 3) Yavagupan (Use of digestive soups)

Donts

- 1) Anger
- 2) Hard work

- 3) Sexual Intercourse
- 4) Sleeping by day
- 5) Excessive talking
- 6) Physical exercise
- 7) Spicy & salty food

Assessment Criteria

Subjective Parameters

- 1 Kandu (Itching)
- 2 Vedana (Pain)
- 3 Vaivarnyata (Discoloration of Skin)
- 4 Srava (Secretions)
- 5 Shotha (Swelling)
- 6 Rukshata (Dryness)

Objective Parameters

Size of patches

Kandu (Itching)

- No itching 0
- Relieved spontaneously + 1
- Relieved by itching + 2
- Disturbs routine + 3
- Require medication + 4

Vaivarnya (Discolouration)

- Normal colour 0
- Light Brown +1
- Break Brown +2
- Dark Brown +3
- Black Brown +4

Srava (Discharge)

- No discharge 0
- Occasional discharge +1
- Discharge on itching +2
- Relieved spontaneously +3

• Not at all relieved +4

Vedana (Pain)

- No pain 0
- Occasional pain +1
- Mild pain on touch +2
- Mild to moderate pain +3
- Severe pain +4

Pidaka

- No Pidaka 0
- Starting of Pidaka +1
- Moderately developed Pidaka +2
- Spread over extremities +3
- Severely spread all over body +4

Rukshata

- No scratch imprint after scratching 0
- Mild scratch imprint after scratching +1
- Scaling on every scratch +2
- Scratching causes eruption +3
- Spontaneous eruption & stretching of skin

+4

Follow up

The follow up of up to 30 days (Weekly) after completion of treatment.

Statistical Analysis

The obtained data was analyzed statistically. Scored values of assessment were analyzed using wilkoxon sign rank test within groups and unpaired t test was used for intergroup comparison. For intra group comparison of investigational values, paired' test was used while for intergroup comparison unpaired t test. The values were expressed as mean ±SEM.'t' test level of P<0.05 and P<0.01 were considered as statistical by significant and highly significant respectively.

Observations and results

In present clinical trial, total 62 patients were registered. Thirty and 32 patients were in Groups A, B respectively. Among 62 patients, 87% were male and 13% were female. The maximum number i.e. 41.93% of patients were in age group of 31 -50 years. The data of Deha Prakriti depicted that 43.54% had Vatakapha Prakriti, 37.09% were of Vata-Pitta Prakriti, and 19.35% patients had Pitta-Kapha Prakriti. As per occupation concerned, maximum number of patients were in general official services, i.e.41.93%, while 20.93% were in business. Eighty -Three Percent patients were from urban areas & 13% from rural areas. Religion showed 95% Hindu and 4 % Muslims. On the basis of socioeconomic level 54.83% were middle class, 41.93% were poor, and 3.22 % were rich. As per educational status all patients were literate (Table 1). Vicharchika exhibited 87.09% as Shushka variety and 12.91% suffered from Sravi. The presence of the cardinal symptom of Vicharchika like Vaivarnyata (100%), Kandu (100%), Pidaka (100%), Raji (100%), Rukshata (98.38%) and Ruja (8.06%) proved their prevalence (Table 2).

The present clinical trial showed highly significant results in both groups. In Group A cardinal symptoms Kandu, Vaivarnyata, Raji, Rukshata, size of patches, Pidaka relieved significantly. Other remaining symptoms like vedana srava sotha were clinically relived but statistical demarcation showed insignificant. (Table no 3). The similar results were found in group B in pacification of cardinal symptoms were also notify highly significant rate as group A (Table 4).

In the study, all the patients underwent the hematological and biochemical investigations before and after treatment for assessment of any the most of hematological and biochemical lab investigations didn't shows remarkable changes along with some exceptions. In Group A, after treatment, RBC count, Hb %, PCV %, Neutrophil count showed significant decrease, while remaining investigations were showed insignificant changes. (Table 6).

In group B Bleeding time after treatment shows significant decrease where as other investigations showed insignificant changes as indicated in (Table 7).

Table 1. General Observations n=62

Sr. No.	Observations	Results in % (Maximum)
1	Age(31-50 years)	41.93
2	Sex (Male)	87
3	Marital status (Married)	83.87
4	Occupation (Service)	41.93
5	Dwelling Status (Urban)	54.83
6	Religion (Hindu)	95.16
7	Socio economic status (Middle class)	54.83
8	Educational Status Literate	100
9	Prakriti (Vata-kapha)	43.54
10	Type of Vicharchika	87.09

Table 2. Symptoms

Symptoms	Present	Absent	Present %	Absent%
Viavarnyata	62	00	100%	00%
Kandu	62	00	100%	00%
Srava	10	52	16%	84%
Ruja	05	57	8.06%	91.94%
Pidaka	62	00	100%	00%
Shotha	00	62	00%	100%
Rukshata	61	01	98.38%	1.62%
Raji	62	00	100%	00%

Table 3. Group A Siravyadha Wilcoxon Sign Rank Test

Symptom	N	Day	Median	25%	75%	W	T-	P
Kandu	30	BT 1st Day	3.000	3.000	4.000	-465.000	-465.000	<0.001*
	30	AT 30th Day	1.000	0.000	1.000			
Vedana	30	BT 1st Day	0.000	0.000	0.000	-10.000	-10.000	0.125
	30	AT 30th Day	0.000	0.000	0.000			
Size of Patches	30	BT 1st Day	109.500	84.000	174.000	-465.000	-465.000	<0.001*
	30	AT 30 th Day	95.000	70.000	150.000			
Vaivarnyta	30	BT 1st Day	3.000	3.000	4.000	-465.000	-465.000	<0.001*
	30	AT 30th Day	1.000	1.000	1.000			
Pidaka	30	BT 1st Day	3.000	3.000	3.000	-435.000	-435.000	<0.001*
	30	AT 30th Day	1.000	0.000	2.000			
Srava	30	BT 1st Day	0.000	0.000	0.000	-10.000	-10.000	0.125
	30	AT 30 th Day	0.000	0.000	0.000			
Shotha	30	BT 1st Day	0.000	0.000	0.000	-5.000	-10.000	0.625
	30	AT 30 th Day	0.000	0.000	0.000			
Rukshata	30	BT 1st Day	3.000	3.000	4.000	-435.000	-435.000	<0.001*
	30	AT 30th Day	1.000	0.000	1.000			
Raji	30	BT 1st Day	3.000	3.000	4.000	-435.000	-435.000	<0.001*
•	30	AT 30 th Day	1.000	1.000	1.000			
*denotes highly s	ignif	icant result						

Table 4. Group B Shringavacharana Wilcoxon Sign Rank Test

Symptom	N	Day	Median	25%	75 %	W	T+	P
Kandu	32	BT 1st Day	3.000	3.000	3.000	-528.000	0.000	<0.001*
	32	AT 30th Day	1.000	0.000	1.000			
Vedana	32	BT 1st Day	0.000	0.000	0.000	-3.000	0.000	0.500
	32	AT 30th Day	0.000	0.000	0.000			
Size of Patches	32	BT 1st Day	71.000	54.000	240.000	-528.000	0.000	<0.001*
	32	AT 30th Day	62.000	46.000	220.000			
Vaivarnyta	32	BT 1st Day	3.000	3.000	4.000	-496.000	0.000	<0.001*
	32	AT 30th Day	1.000	1.000	1.000			
Pidaka	32	BT 1st Day	3.000	3.000	3.000	-435.000	0.000	<0.001*
	32	AT 30th Day	1.000	1.000	2.000			
Srava	32	BT 1st Day	0.000	0.000	0.000	-1.000	0.000	1.000
	32	AT 30th Day	0.000	0.000	0.000			
Shotha	32	BT 1st Day	0.000	0.000	0.000	0.000	0.000	1.000
	32	AT 30th Day	0.000	0.000	0.000			
Rukshata	32	BT 1st Day	3.000	3.000	3.500	-496.000	0.000	<0.001*
	32	AT 30th Day	1.000	0.000	1.000			
Raji	32	BT 1st Day	3.000	3.000	3.000	-435.000	0.000	<0.001*
	32	AT 30th Day	1.000	1.000	2.500			
*denotes highly s	signifi	cant result						

Discussion

There were 41.93% patients of middle age group (31-50 years) which seems to be by chance. There were no proceeding documents in this regard. Maximum (87%) patients were of male gender. The male patients frequently

face cement, mud, coal tar etc due their profession, alongwith tobacco chewing, smoking, alcohol; longstanding causative factors of skin disorders. Maximum number of patients had Vata-Kapha Prakriti (43.54%,) The number of patients in other groups were closer to it. Deha Prakriti also depends on the age and the disease had no relation to the Deha

Table 5. Unpaired t test in Group A (Siravyadha) and Group B (Shringavacharana)

Symptom	N	Day	Mean	±SEM	Std Dev	% Change	Difference	T	P
Kandu	30	Group A	80.833	±3.099	16.973	80.833%	2.708	0.592	0.556
	32	Group B	78.125	±3.342	18.902	78.125%	2.700	0.392	0.550
Vedana	30	Group A	11.667	±5.715	31.303	11.667	E 417	0.760	0.450
	32	Group B	6.250	± 4.348	24.593	6.250	5.417	0.760	0.450
Size of Patches	30	Group A	18.232	± 1.405	7.695	18.232	3.910	1 906	0.062
•	32	Group B	14.322	±1.501	8.491	14.322	3.910	1.896	0.063
Vaivarnyta	30	Group A	74.444	±2.907	64.063	74.444	10.382	2.242	0.020
ū	32	Group B	64.063	±3.558	20.129	64.063	10.362	2.242	0.029
Pidaka	30	Group A	68.770	±6.062	33.204	68.770	14.365	1 020	0.071
	32	Group B	54.405	±4.997	28.266	54.405	14.303	1.838	0.071
Srava	30	Group A	11.111	±5.380	29.470	11.111	0.020	1 (00	0.114
	32	Group B	2.083	±2.083	11.785	2.083	9.028	1.602	
Shotha	30	Group A	3.939	±3.367	18.444	3.939	2.020	1 200	0.231
	32	Group B	0.000	±0.000	0.000	0.000	3.939	1.209	
Rukshata	30	Group A	76.389	±3.977	21.784	76.389	2 421	0.400	0.600
	32	Group B	73.958	± 4.548	25.729	73.958	2.431	0.400	0.690
Raji	30	Group A	69.250	±4.300	23.550	69.250	11 ((1	1.7(2	0.000
	32	Group B	57.589	±4.976	28.147	57.589	11.661	1.763	0.083

Table 6. Siravydha Paired t test with Lab Investigations

Clinical		N	Mean ±	Mean ±SEM		t-value	P value
reatures							
Hb%	BT	30	13.020	±0.215	1.180	3.415	0.002
	AT	30	12.393	±0.299	1.636		
P.C.V.	BT	30	39.260	±0.600	3.285	3.400	0.002
	AT	30	37.503	±0.779	4.267		
ESR	BT	30	21.667	±3.380	18.511	1.093	0.284
	AT	30	18.467	±2.631	14.410		
RBC	BT	30	4.455	±0.0985	0.540	3.904	< 0.001
	AT	30	4.240	±0.108	0.592		
BT	BT	30	1.757	±0.0899	0.492	0.756	0.456
	AT	30	1.687	±0.0665	0.364		
*denotes	highly	significa	ant result				

Table 7. Lab Investigation of Group B Shringavacharana paired t test

Clinical features		N	Mean±SE		SD	t-value	P value
Hb%	BT	32	12.566	±0.303	1.717	-0.615	0.543
	AT	32	12.659	±0.310	1.753		
P.C.V.	BT	32	38.478	± 0.786	4.445	-0.208	0.837
	AT	32	38.581	± 0.818	4.625		
ESR	BT	32	21.000	±3.443	19.477	-0.315	0.755
	AT	32	22.000	±3.503	19.819		
RBC	BT	32	4.529	±0.102	0.574	0.660	0.514
	AT	32	4.480	±0.112	0.634		
BT	BT	32	1.766	±0.0676	0.382	3.017	0.005*
	AT	32	1.573	±0.0563	0.318		
*denotes l	nighly	signi	ficant res	ult			

Prakriti of patients. Married patients were 83.87% but the rationality is still unpredictable. Occupation wise general service men showed which may be predominance up to 41.93% just by chance or the prolonged sedentary posture might be the causative factor. Socioeconomic status showed maximum number in middle class group up to 54.83%. The same figure also exhibited by dwelling status of patients with in urban class just by chance.

Among all Kshudra Kustha Vicharchika is common. The occurrence might be due to climatic condition, because these types of diseases occur chiefly in humid areas and the place where this study was carried out was a humid region. *Vicharchika* is a condition where patient presents with a severe, painful, itching skin eruptions and dryness of the skin which can be rightly correlated to eczema.

Raktamokshana procedures, Shringavacharana was modified; instead of mouth suction vacuum pump was utilized with constant pressure 250 mm of. This pressure was estimated threw a serve work of 60 healthy volunteers which showed the average human aspirating capacity is 220 mm The dimensionless suction Shringavacharana procedure got standardization along with suitable and scientific background. Utilization of vacuum pump avoids aspiration of blood in performer's mouth. In Siravyadha 18 number disposable needle was utilized as equipment which was easily available and suitable for tentative procedure. Both methods found easy

In Group A, Siravyadha showed incredible outcome in pacification of symptoms because it is a prime modality of Raktamokshana which can act in any kind of vitiation of blood and is also beneficial if the vitiation of doshas present systemically. The Siravyadha is considered as half or even full treatment in surgical disorders (Sushruta Shareera 8/23, page no.383). The direct removal of intravenous blood caused significant dropp in Hb%, PCV %, ESR, RBC count, bleeding time

as all these factors are directly related to blood volume. Fortunately, the patients did not suffer any kind of systemic illness. The above hematological changes suggest safety of chosen modality and precautions must be taken in abovesaid parameter before selection of patients.

In Group B, pacification of the symptoms was statistically similar to Group A but percentage change showed better results in group A. (table no 5). The removal of extracellular blood was a major cause behind intactness in Hb%, PCV%, RBC count in Group B. so there was no decrease in the above investigations in this group.

Conclusion

The present clinical trial showed highly significant consequences in both groups. In Group A cardinal symptoms Kandu, Vaivarnyata, Raji, Rukshata, size of patches, Pidaka relived significantly, other. symptomise were relieved but couldn't pass statistical demarcation. In Group B the pacification of cardinal symptoms was also notably highly significant as Group A. The most of hematological and biochemical lab investigations didn't show remarkable changes although with some exceptions. In Group A, after treatment, RBC count, Hb %, PCV %, neutrophil count showed significant decrease other investigation showed insignificant changes. In Group B bleeding time after treatment showed significant decrease, other investigations showed insignificant changes. The Raktamokshana methods Siravyadha and Shringavacharana are both effective in the management of Vicharchika, but Siravyadha found most efficient with least complications like reduction in Hb%. So, both these modalities are nonpharmacological, easy to perform, cost effective and result oriented in all kinds of Vicharchika.

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