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EFFICACY OF JALAUKAVACHARANA IN VISARPA W.S.R TO HERPES ZOSTER – AN OBSERVATIONAL STUDY

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ABSTRACT

Skin is the first organ of the body interacting with environmental agents like physical, chemical and biological agents. The worldwide incidence of Herpes Zoster is 5-10% per 100 populations and the Indian incidence is 2-6% per 100 populations. The disease Herpes Zoster resembles to a condition called as *Visarpa* which is described in our ancient classics of Ayurveda. *Visarpa* is one of the major skin diseases which are explained in detail apart from '*Kushta' vyadhi* in all the classics. This gives us an idea about the seriousness and significance of this disease. The disease *Visarpa* is characterized by clinical features such as *sphota, daha, shoola, raga, kandu*, The description of management of *Visarpa* with different treatment modalities is available not only in the classical literatures of Ayurveda, but also in the later text books. *Raktamokshana* is a method of treatment which is considered effective in *twak roga, granthi, shotha* and *raktapradoshaja vyadhis*. This study aims at observing the effectiveness of *Jalaukavacharana* in the management of *Visarpa*.

KEYWORDS: *Visarpa, Herpes Zoster, Rakthamokshana, Jalaukavacharana.*

INTRODUCTION

Visarpa is one among the major skin disorders explained in Ayurvedic classics. Almost all the authentic texts of Ayurveda give vivid explanations of *Visarpa* of its nature. The pain and burning sensation makes the sufferer to rush to the doctor. Chronicity of the pain also causes panic. *Visarpa* though not included in the chapter of *Kushta*, rated as one among disorder

involving the *Rakta* and *Pitta dosha*.[1] The manifestation of *sphotas* along with *daha* are unique, makes the clinician to think of the disease by look itself at one instant. Such a typical pattern of *sphotas*, when occurs involves the cutaneous nerve endings making/causing severe pain and burning sensation, literally making the patient to scream.[1] In order to relieve the agony of pain clinician has to think of most suitable therapies/medicines.

Symptoms of *Visarpa* correlates with Herpes Zoster a variety in modern sciences, which is said to be a viral infection, caused by varicella Zoster virus. Most of the *lakshanas* described in the context of *Pittaja* and *Vata Pittaja* varieties match with Herpes Zoster. In herpes, inspite of the lesions appearing simple, pain and burning sensation experienced by the patient is agonizing. The post herpetic neuralgia as a complication of the disease can also cause a long term suffering to the patient.

The global incidence of herpes Zoster is 5-10 cases per 1000 population and the Indian incidence is estimated to be around 2 to 6 per 1000 population.[15]

Even though, the disease is considered as a self-limiting disorder, an early intervention will reduce the agony of pain and subsequent complications. But currently the treatment options available in modern medicine are limited. Medications with NSAIDs and corticosteroids are considered to be the acceptable way of symptomatic management along with antiviral drugs such as Acyclovir famiciclovir etc.[5] However these drugs have some limitations as the antivirals are quite expensive and they are less sensitive to varicella Zoster virus.

In the above situation, the exploration of Ayurvedic therapy is an important area for research in the management of Visarpa vis-à-vis Herpes Zoster. With this perspective, present study is undertaken to observe the effect of Ayurvedic treatment, *Raktamokshana* in the form of *Jaloukavacharana*. It was thought necessary to examine the utility of these lines of management in *Visrapa* vis-à-vis Herpes Zoster.

Aim of the Study

1. To evaluate the efficacy of *Jalaukavacharana* in the management of *Visarpa* w.s.r to Herpes Zoster.

MATERIALS AND METHODS

A. Selection of patients

Total of 40 Patients suffering from *Visarpa* vis-à-vis Herpes Zoster were selected incidentally from the Out-patient departments of Sri Jayachama Rajendra Institute of Indian Medicine and Hospital, Bangalore.

B. Study Design

Single blinded observational study. It was an observational study. After designing the patients based on the parameters, they were assigned into a single group. All patients were subjected for *Raktamokshana* using *Jalouka*.

C. Inclusion Criteria

1. Patients of either sex between the age group of 16 to 60 years.
2. Freshly detected and untreated cases of *Visarpa.*
3. Established and treated cases of *Visarpa* who voluntarily discontinued the earlier treatment.

C. Exclusion Criteria

Patients with systemic disorders like Diabetes Mellitus, Hypertension, HIV and HbSAG positive patients were excluded from the study.

D. Diagnostic Criteria

Patients presenting with clinical features such as

1. *Sphota* – Typical herpetic lesion i.e. Maculo popular, vesicular or pustules
2. *Daha* – Burning sensation
3. *Vedana* – Pain
4. Any other associated symptoms such as *raga* and *kandu*.

E. Investigations

- Blood for Hb%, TC, DC, ESR, RBS
- Urine – Sugar, Albumin, Micro
- HIV I & II, HbSAG

F. Plan of treatment

Jaloukaracharana was carried on the 1st day of treatment. The first sitting of *Jaloukavacharana* was done on 1st day and continued every alternate day.

The total number of sittings carried from 2 to 5

The leech selected for the procedure was prepared by keeping it in a kidney tray containing *haridra jala*. Once the leech secreted its saliva and became active it was considered to be ready for the procedure.

The herpetic lesions of the patient were cleaned with luke warm water. The anterior sucker of leech was contacted with the lesion by placing on its surface. After attaching firmly to the skin, the anterior end of the leech used to attain a horseshoe shape. No sooner it needs to suck the blood, wet cotton was placed over the body of *Jalouka*. The leech was allowed to suck the blood until it detached from the skin voluntarily or stopped sucking the blood.

The stomach ful fed leech is induced vomiting by applying turmeric powder over the mouth part. After complete emesis of the blood the leech is made active keeping it in water soaked with Turmeric powder for quite some time and later shifted to fresh water.

Usually it takes 25 minutes to 1 hour for complete sucking of blood. After the procedure, the wound was dressed with a guaze containing *haridra* powder later a pressure bandage was applied over the lesions to stop further bleeding.

Then placed the leech in turmeric water to make it active, later kept in fresh water.

Assessment Criteria

A. Subjective Parameters

1. Shoola (Pain)

- P_0 - No Pain
- P_1 - Mild / Occasional pain / any hyperaesthesia.
- P_2 - Moderate pain / pain present most of the time
- P_3 - Severe pain / pain present always / disturb sleep, unable to ware cloth

2. Daha

- D_0 - No daha

- D_1 - Mild daha/ occasional daha
- D_2 - Moderate data / Daha present during most of the time
- D_3 -Severe daha / data present always / disturbing sleep / unable to ware cloth

3. Kandu

- K_0 - No kandu
- K_1 - Mild kandu
- K_3 - Moderate kandu
- K_4 - Severe kandu

B. Objective Parameters

1. Sphota

- S_0 – Healed sphotas
- S_1 – Healing stage with scars and hypo/hyper pigmented skin
- S_2 – Crust formation, partially heald with scales
- S_3 – Erythematous, fresh lesions i.e. actue

2. Raga

- R_0 - No ragata
- R_1 - Dull red
- R_3 - Red
- R_4 - Bright red

Assessment

Three assessments were made during the course of the treatments.

1) Initial assessment on day 1 i.e. before treatment.
1) Mid assessment analyse on 8^{th} day
2) Final assessment on 15^{th} day, after commencement of treatment.

Overall Assessment

1) No response	:	Lesions not healed
2) Mild response	:	Lesions healed but not completely relieved
3) Moderate response	:	Sphotas healed but any symptoms not completely relieved
4) Complete relief	:	Complete relief of signs and complaints

5) Marked response : Lesions healed but any one of the symptom not completely relieved.

OBSERVATIONS

Out of 40 patients there were 22 (55%) male and 18 (45%) female patients. Maximum number of patients i.e 10 (25%) were between the age group of 31 – 40 years. maximum number of patients belonged to Hindu community 22 (55%), a majority of patients I,e 16 (40%) were of lower middle class, Maximum number of patients ie, 29 (72.5%) was married, Majority of patients were from urban area i.e. 32 (80%), It was observed that 26 (65%) patients were non-vegetarian and 14 (35%) patients were vegetarians, Madhayama Koshta was present in 20 (50%) patients followed by Mridu and Kroora 10 (25%), maximum number of patients were Pitta vata prakriti i.e 10 (25%).

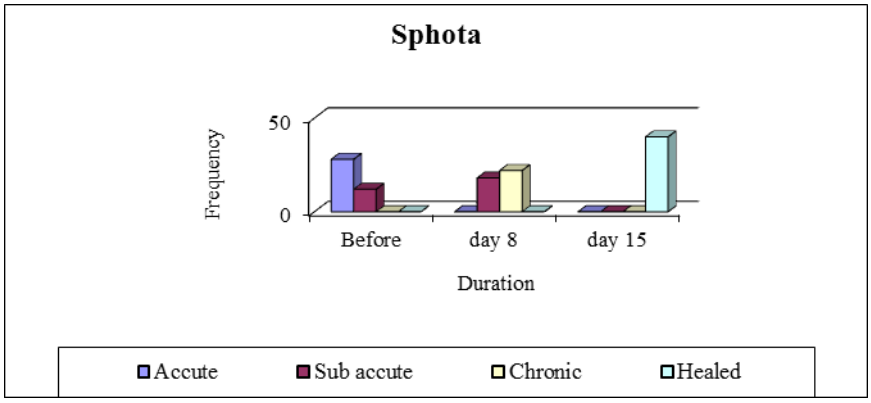
In the present study 28 (70%) patients reported that acute lesions and 12 (30%) patients reported with sub-acute, During the study, 31(77.5%) patients reported within 5 days of occurrence of reported within 5 days of occurrence of symptoms, 5(20%) patients reported in between 5^{th} and 10^{th} day after the occurrence of lesions and 4(10%) patient approached for treatment after 10 days, From the study, it was found that sphota, shoola, daha and raga were present in all parents and jwara was present in 3 (16.67%) patients, 32(80%) patients gave a definite history of suffering from chickenpox and 8(20%) patients were unaware of an earlier of chickenpox, Incidence of the involvement of Dermatomes was maximum in thoracic 16(40%) followed by Cervico-thoracic 6 (15%), Lumbar 6 (15%) and Cervical 6 (15%). Sacral 4(10%) & Trigeminal 2 (10%), Out of 40 patients 29 (72.5) were fresh and 11 (27.5) were treated with topical and internal antiviral drugs.

A. The frequency of Sphotas at different intervals

	SPHOTA				TOTAL
	Acute	**Sub-acute**	**Chronic**	**Healed**	
DURATION BEFORE	28	12			40
	70.0%	30.0%			100.0
DAY 8		18	22		40
		45.0%	55.0%		100.0
DAY 15				40	40
				100.0	100.0

Before treatment, there were 70% of the sample had acute sphotas, followed by 30% with sub-acute condition. None of them were chronic or healed before treatment. However, after

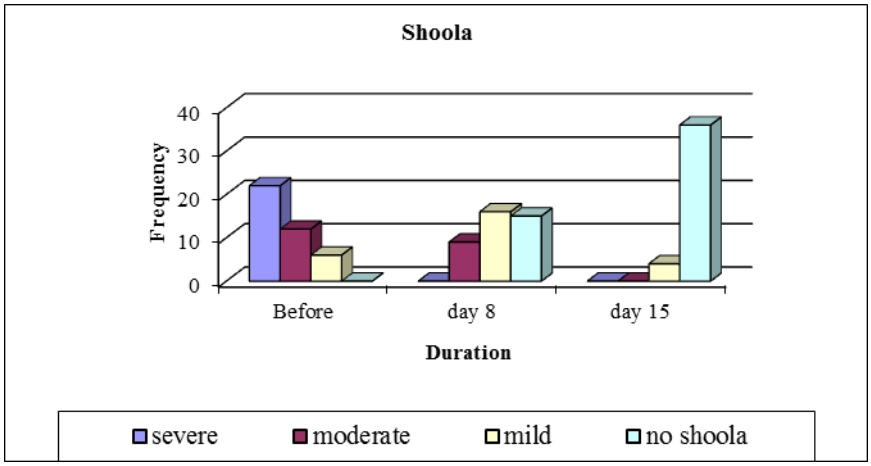
the treatment, none of the sample had acute, sub-acute and chronic conditions and all of them were healed (100%). When contingency coefficient test was applied to these frequencies, a significant contingency coefficient value was observed (CC=.788; P<.000) indicating a highly significant association between duration and categories of sphotas. In other words, there is a significant improvement in the condition of patients after the treatment.



B. Frequency of Shoola at different intervals

	SHOOLA				TOTAL
	Severe	**moderate**	**mild**	**No shoola**	
DURATION BEFORE	22	12	6		40
	55.0%	30.0%	15.0%		100.0
DAY 8		9	16	15	40
		22.5%	40.0%	37.5%	100.0
DAY 15			4	36	40
			10.0%	90.0	100.0

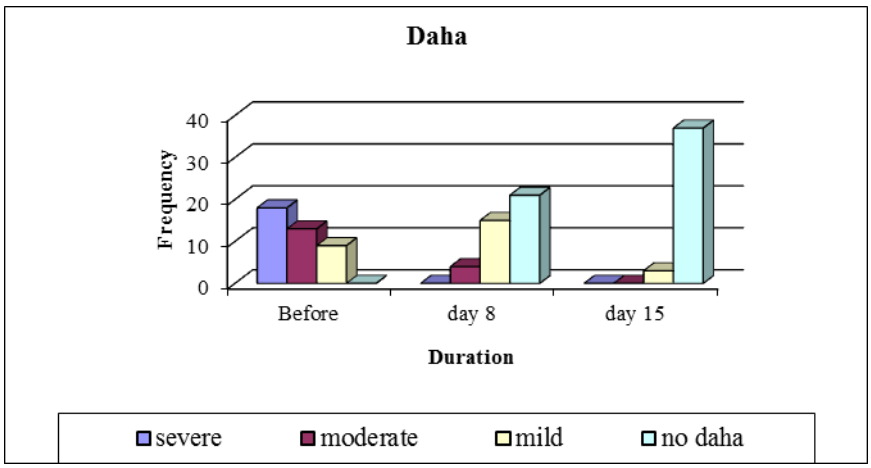
Before treatment, there were 55% of the sample had severe shoola, followed by 30% with moderate condition and 15% of them were mild before treatment. However, after the treatment, none of the sample had severe, moderate and mild conditions and all of them were healed (100%). When contingency coefficient test was applied to these frequencies, a significant contingency coefficient value was observed (CC=.680; P<.000) indicating a highly significant association between duration and categories of shoola. In other words, there is a significant improvement in the condition of patients after the treatment.



C. Frequency of Daha at different intervals

	DAHA				TOTAL
	Severe	moderate	mild	No daha	
DURATION BEFORE	18	13	9		40
	45.0%	32.5%	22.5%		100.0
DAY 8		4	15	21	40
		10.0%	37.5%	52.5%	100.0
DAY 15			3	37	40
			7.5%	92.5%	100.0

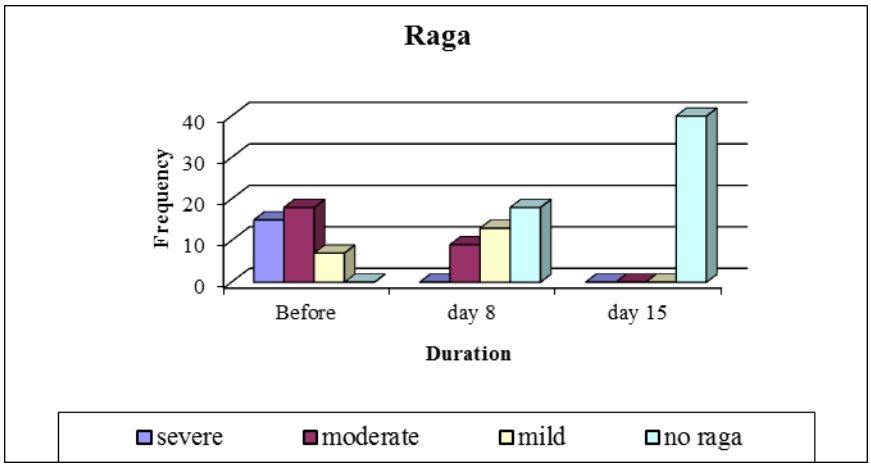
Before treatment, there were 45% of the sample had severe daha, followed by 32.5% with moderate condition and 22.5% of them were mild before treatment. However, after the treatment, none of the sample had severe, moderate and mild conditions and all of them were healed (92.5%). When contingency coefficient test was applied to these frequencies, a significant contingency coefficient value was observed (CC=.665; P<.000) indicating a highly significant association between duration and categories of daha. In other words, there is a significant improvement in the condition of patients after the treatment.



D. Frequency of Raga at different intervals

	RAGA				TOTAL
	Severe	moderate	mild	No raga	
DURATION BEFORE	15	18	7		40
	37.5%	45.0%	17.5%		100.0
DAY 8		9	13	18	40
		22.5%	32.5%	45.0%	100.0
DAY 15				40	40
				100.0	100.0

Before treatment, there were 37.5% of the sample had severe raga, followed by 45% with moderate condition and 17.5% of them were mild before treatment. However, after the treatment, none of the sample had severe, moderate and mild conditions and all of them were healed (100%). When contingency coefficient test was applied to these frequencies, a significant contingency coefficient value was observed (CC=.678; P<.000) indicating a highly significant association between duration and categories of raga. In other words, there is a significant improvement in the condition of patients after the treatment.

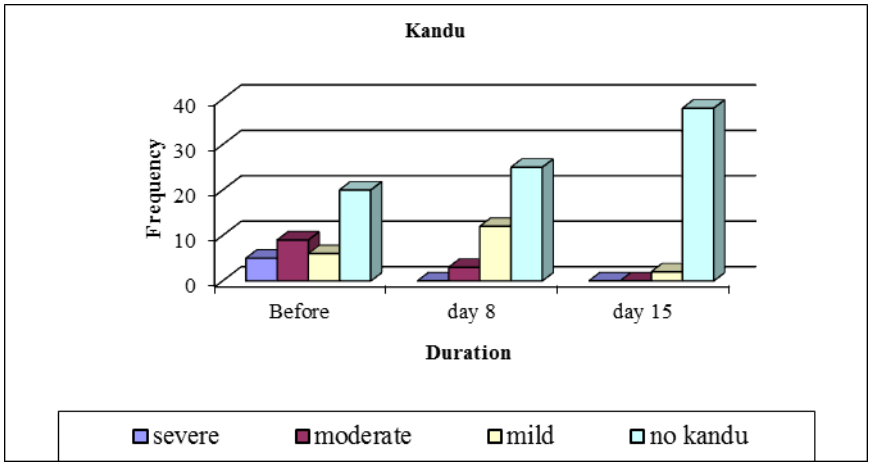


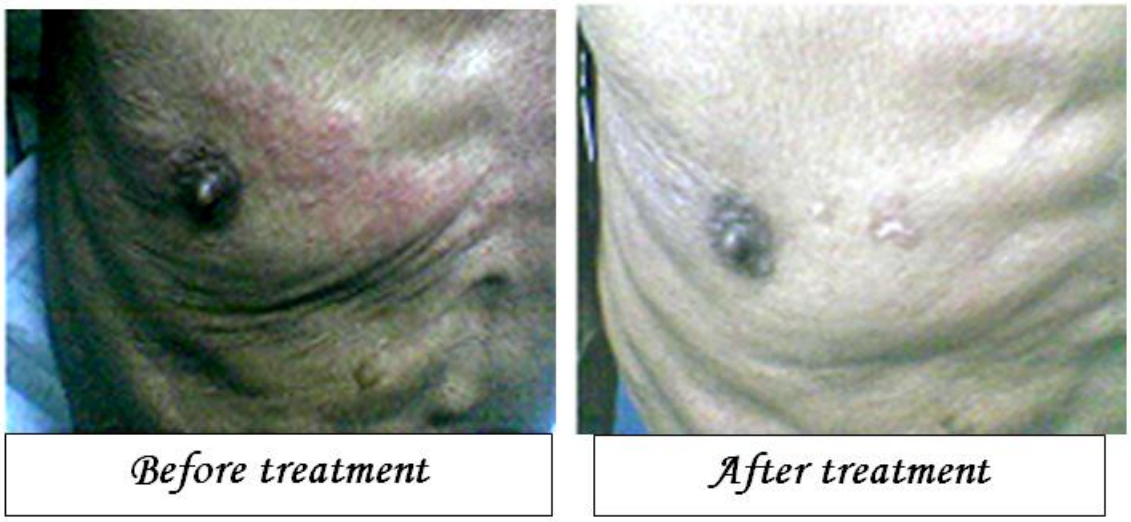
E. Frequency of Kandu at different intervals

	KANDU				TOTAL
	Severe	moderate	mild	No kandu	
DURATION BEFORE	5	9	6	20	40
	12.5%	22.5%	15.0%	50.0%	100.0
DAY 8		3	12	25	40
		7.5%	30.0%	62.5%	100.0
DAY 15			2	38	40
			5.0%	95.0%	100.0

Before treatment, there were 12.5% of the sample had severe kandu, followed by 22.5% of the sample who had moderate condition and 15% of them were mild before treatment.

However, after the treatment, none of the sample had severe, moderate and mild conditions and all of them were healed (95%). When contingency coefficient test was applied to these frequencies, a significant contingency coefficient value was observed (CC=.472; P<.000) indicating a highly significant association between duration and categories of kandu. In other words, there is a significant improvement in the condition of patients after the treatment.





DISCUSSION

Visarpa is a caused due to the involvement of all the three *doshas* where *pitta* is predominant.[1,2] The vitiation of the *doshas* is by both *nija* and *agantu* varieties. The *nija hetus* are intake of *lavana, amla, katu, ushna, dadhi, amla, raga, shadava, shukla, sura, souveera* etc.[3] The *dravyas* predominantly having *vikasi* and *asthira* qualities which inturn gets into in *prasara* qualities. The external trauma which includes *shastra, prahara, vyala, nakha, danta* causes the vitiation of *pitta* and *rakta* immediately.[4]

The *samprapti Ghatakas*[13]

Dosha	-	*Pitta pradhana tridosha*
Dooshya	-	*Rasa, rakta, laseeka, mamsa*
Agni	-	*Dhatwagni*
Ama	-	*Tajjanya ama*
Srotas	-	*Raktavaha srotas*
Sanchara sthana	-	*Rasayani*
Adhishtana	-	*Twacha*
Vyaktastana	-	*Twacha*
Rogamarga	-	*Bahya*

Comparison between symptoms of *Visarpa* and Herpes Zoster

Sphota	Rash
Raga	Erythema
Sheeghrapaki	Acute rash appears within 12-24 hrs.
Visrapanasheelata	Appearing in a continuous or interrupted band
Paka	Postulation
Various type of *shoola*	Pain
Jwara	Fever
Angamarda	Bodyache
Angasada	Malaise
Daha	Burning
Shirashoola	Headace
Bhrama	Vertigo
Vatamootra purisha bandha	Disturbances in urination and defecation
Kandu	Itching

***Jaloukavacharana*: The probable Mode of Action**

Raktamokshana is a method of treatment which is considered effective *in twak roga, granthi, shotha and raktapradoshaja vyadhis.*[1]

Raktamokshana which improves varna, indriya siddi, agnishakti, bala etc[7] all were observed in experiment.

There are different treatment modalities described in treating *Visarpa* but *raktamokshana* is considered superior, based on the observation and results.

It is considered equivalent to the combination of rest of all other treatment modalities.

Raktamokashana relieves the symptoms fast. When compared with other treatments like *snehana, swedana, vamana* etc.

Without pitta there is no *paka*, so *raktamokshana* is beneficial in arresting the attaining *paka* as in *pittaja vidradhi*, *Jaloukavacharana* is advised to do to arrest *paka*, along with *dushta rakta*, the vitiated *pitta* is expelled from the body.

So it holds good in *Visarpa* also in which expulsion of vitiated *pitta* further suppuration can be prevented.

There are different methods of *raktamokshana* depending on *dosha* predominance.

Jaloukavacharana is indicated where *pitta* and *rakta* are vitiated, where *Visarpa* is due to the vitiation of *pitta* and *rakta* are main factors so *Jaloukavacharana* is suitable procedure where *dushta rakta* can be removed from the site.[1,3]

There is no much information about leech application in the management of Herpes Zoster. It can be understood by analyzing the role of different biochemical secretions of the leech which are released while it is sucking. The saliva contains more than 30 enzymes that has got several actions. The major action of leeches saliva in inhibition of blood clotting. This is done by the mechanism of inhibition of platelet aggregation and coagulation cascade.[15] This mechanism is carried out by the combination of hirudin, calin, hyluronidase, eglines, bdellin apyrase, collagenase, kallikrein and tryptase inhibitors. Here hirudin is a major factor which inhibits the action of thrombokinanse. Hirudin inhibits platelet aggregation and the coagulation cascade.[15] This causes relief of venous congestion and the presence of anti-coagulant causes the bite to ooze up to 48 hours resulting in further reduction in venous congestion.[17]

Calin causes secondary bleeding for approximately another 12 hrs.[17] The other enzymes present are protein inhibitors that inhibit coagulation by means of various mechanisms.[17] Hyluronidase which is a spreading factor contributes in the anti-coagulation process by clearing the path for active substances to penetrate.[17] Reduction in venous congestion causes reversal of oedematous changes. Fresh blood flow starts once the venous congestion is relieved. Histamine also facilitates fresh blood flow. This fresh blood flow facilitates the faster healing of lesions.[17]

There are unconfirmed reports about the action of hyluronidase. It is speculated to have some antibiotic property.[17] This will probably prevent a secondary infection and facilitates the healing of lesion.

The saliva of leech is said to contain some non-specific anaesthetic agents which probably anaesthetize the wound area. The reason for the relief of pain in the area of lesion can be attributed for the same anaesthetic agent. It was observed that the immediate pain relief is sustained for 7-8 hrs after application.[17]

Along with this, the secretion of the saliva also contains some anti-inflammatory and analgesic agents which probably act through their anti-nociceptive effect and counter irritation.[17] Gradual and sustained reduction in pain could be because of these substances.

CONCLUSION

- Pittaja and Vata-pittaja Visarpas can be correlated with Herpes Zoster.
- This disease affects more in elderly people.
- Jaloukavacharana has a vital role in the symptomatic relief of shoola and aids the faster healing of lesions.
- Post Herpetic neuralgia can be prevented by early intervention.

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