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Case Study

EFFECT OF *SIRAVEDHA* IN THE MANAGEMENT OF *VISWACHI* WITH SPECIAL REFERENCE TO CERVICAL RADICULOPATHY

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ABSTRACT

Radiculopathy, commonly referred as pinched nerve, refers to a set of conditions in which one or more nerves are affected and their functioning is hampered. Cervical radiculopathy is a clinical condition resulting from compression of nerve roots due to disc herniation or degenerative stenosis which leads to neck pain, numbness and radiating arm pain in the distribution of the affected nerve root. Often this radicular pain is accompanied by motor or sensory disturbances also. The main treatments available are use of non-steroidal anti-inflammatory drugs, epidural steroid injection and surgery in the last stages. But the side effects of NSAID's, incomplete neurologic recovery, loss of full cervical range of movement and surgical complications are the main hurdle in the management of cervical radiculopathy. In Ayurvedic classics, clinical picture of cervical radiculopathy can be explained under the heading of *Viswachi*. It is a *Vatavyadhi* mainly affecting the *Kandaras* leading to restricted movements and loss of function of upper limb. At present, there is no specific treatment procedure, which can offer quick relief of pain and other associated symptoms of cervical radiculopathy. Acharya Susruta mentioned *Siravedha* in the management of *Viswachi.* It is one of the most effective methods of *Rakthamoksha* by which vitiated *Doshas* can be eliminated in a faster way. In the present study, 150ml of blood was withdrawn from corresponding cephalic vein as a onetime procedure. Assessments were done before procedure, immediately after procedure, on 7th, 14th, 21st and 28th day after procedure. The results showed *Siravedha* is an effective treatment procedure in the management of *Viswachi*.

INTRODUCTION

Cervical radiculopathy is the condition in which a nerve root becomes inflamed or damaged due to nearby bone spur or cervical herniated disc. Because of present day lifestyles the incidence of cervical radiculopathy is drastically increasing day by day. The annual incidence of cervical radiculopathy is 107.3 per 100000 for men and 63.5 per 100000 for women.[1] The clinical manifestations of cervical radiculopathy include neck and arm pain (brachalgia), paraesthesia, and motor weakness in the distribution of the compromised nerve root. Symptoms often respond to conservative treatments like use of NSAID'S, physiotherapy, and epidural steroid injections. Intractable pain or functional neurological deficit is an indication for surgical intervention. Surgical options include anterior cervical discectomy (with or without the application of a cervical spine locking plate), posterior laminoforaminotomy, cervical total disc replacement.[2]

By considering the similarities in the signs and symptoms, cervical radiculopathy can be correlated with *Viswachi*. In the pathogenesis of *Viswachi*, as a result of *Avarana, Vata kopa* and *Raktha dushti* occurs, which in turn affect *Kandara* leading to constriction of tendons of palm, fingers and back of arm leading to functional loss of affected upper limb[3]. So, the treatment procedures which can pacify aggravated *Vata* and vitiated *Raktha* can be incorporated in the management of *Viswachi.*

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Siravedha is considered as *Ardhachiktsa* in *Salyatantra.*[4] It is a para surgical procedure in which particular veins in the body are punctured using sharp instruments. Acharya Susruta mentioned *Siravedha* in the management of *Viswachi* [5] and the puncturing site mentioned is the vein situated 4 *Angula* (7cm) above or below *Koorpara sandhi* (cephalic vein).[6] *Siravedha* will be beneficial in *Viswachi* as it can reduce venous congestion, and thereby decompression of the pinched nerve root and it can provide immediate relief of pain, numbness and other associated complaints of cervical radiculopathy.

Rationale of the Study

The incidence of cervical radiculopathy is drastically increasing day by day due to strenuous activities like lifting heavy objects, occupations demanding prolonged sitting, especially after second decade of life, improper postures and sedentary lifestyles. In clinical practice of *Viswachi,* pain management is a hurdle. Modern system of medicine has conservative treatments like non-steroidal anti-inflammatory drugs, epidural steroid injection and surgery in last stages for cervical radiculopathy. But it has the side effects of NSAID's, incomplete neurologic recovery, loss of full cervical range of movement and surgical complications.

Snehana, Swedana, Nasya etc. are the regular treatment procedures done to alleviate the symptoms of *Viswachi*. But these procedures are time consuming and do not give an instant relief of pain. Even after the complete course of *Snigdha rooksha chikitsa* the symptoms of *Viswachi* may be persisting. In such cases *Rakthamoksha* can make remarkable changes in its clinical picture[7]. *Siravedha* is a simple, cost effective and less time-consuming procedure and can give immediate relief of symptoms. Complications are also minimal in *Siravyadha,* when compared with modern surgical procedures. Hence an attempt is made to study the effect of *Siravedha* in reducing pain, numbness, disability and tenderness in cervical radiculopathy.

Case Report

A 54yrs old female patient, an IT Professional came to our OPD with complaints of neck pain since 3yrs and radiating pain and numbness from neck to left upper limb since 2yrs. On the basis of detailed history and examination the patient was diagnosed as having cervical radiculopathy. *Siravedha* which is indicated for *Viswachi* by Acharya Susruta is selected

Past History:

Nothing relevant

Examination

Spurling's test	Positive
Cervical flexion rotation test	Positive
Pain (VAS Scale)	VAS score= 5 (Moderate pain)
Numbness	Severe numbness
Neck disability index	56% (moderate disability)
Tenderness	Grade 3

Investigations Done

RE, CT, BT, FBS, PPBS, HIV, HCV, HBs Ag, VDRL, X-ray, MRI, ECG

- **MRI:** C2C3, C4C5 and C6C7: Tiny central posterior disc bulge with grade I thecal sac indentation.
- C5 C6: Mild diffuse annular disc bulge with small central posterior protrusion with grade I thecal sac indentation. Mild narrowing of bilateral lateral recess and neural foramen. Grade I impingement of the bilateral exiting nerve roots
- Relative spinal canal stenosis at C5C6 level by disc osteophytes complex with mild effacement of subarachnoid space

All other investigations were within normal limit.

Methodology

Poorvakarma

The procedure was explained to the patient in detail and consent was taken. The patient was given 250ml of rice gruel half an hour before the procedure. The vitals were recorded. *Snehana* done externally with *Dhanwantharam thailam* and local *Swedana* with hot water.

Pradhanakarma

The patient is seated comfortably on ICU bed. The left upper limb was exposed and cubital fossa was painted with betadine solution. A tourniquet was applied 4 *Angula* (7cm) above the cubital fossa in such a way that it is neither too tight nor too loose to make the veins more prominent. Needle of the blood transfusion set was introduced into the median cubital vein and fixed it with an adhesive plaster. Immediately after visualizing the flow of blood, the tourniquet was removed and the open outlet of the blood transfusion set was placed into the measuring jar to collect the blood and to measure the quantity of the letting out blood. The patient was observed during the procedure with respect of vitals, sweating or any other complications as a precautionary measure for suitable managements. After getting 150ml of blood, the blood transfusion set was removed carefully from the vein.

An adhesive plaster was applied to the punctured site to prevent contamination.

Paschat Karma

Immediately after the procedure, the patient was made to relax and *Drakshadi Kashaya* was given. The patient was advised to avoid exercise, sexual intercourse, anger, cold bath, cold breeze, day sleep, too much conversation, grief, intake of heavy food and use of sour and pungent substances in food for one day.

Fig. 1: Materials for *Siravedha*

Fig. 2: Procedure of *Siravedha*

OBSERVATION AND RESULTS

Parameter	Before Procedure	After procedure				
		Immediately after procedure	7th day	14th day	21st day	28th day
Spurling's test	Positive	Negative	Negative	Negative	Negative	Negative
Cervical flexion rotation test	Positive (severe pain)	Positive (slight pain)	Negative	Negative	Negative	Negative
Pain	Moderate pain (VAS score=5)	Mild pain (VAS score=3)	No pain (VAS score=0)	No pain (VAS score=0)	No pain (VAS score=0)	No pain (VAS score=0)
Numbness	Severe numbness	Mild Numbness	No numbness	No Numbness	No numbness	No numbness
Neck disability index	56% moderate disability	42% moderate disability	23% mild Disability	10% no disability	0% no disability	0% no disability
Tenderness	Grade 3	Grade 1	Grade 0	Grade 0	Grade 0	Grade. 0

DISCUSSION

The incidence of cervical radiculopathy is drastically increasing day by day. At present there is no specific treatment procedure which can offer quick relief of pain and other associated symptoms of cervical radiculopathy. In Ayurvedic classics, clinical picture of cervical radiculopathy can be explained under the heading of *Viswachi* and Acharya Susruta mentioned *Siravyadha* as its management.

Discussion on the Procedure: *Siravedha*

Siravedha can be advocated if the *Doshas* are localized over whole body or if the disease is not cured by *Snigdha rooksha chikitsa. Viswachi,* a *Vatavyadhi* may be of *Dhatukshayaja* or *Avaranajanya*. In both conditions there is association of *Sopha* before the manifestation of symptoms. *Siravedha* is an excellent procedure in reducing such *Sopha.*

Poorva karma

The patient was given with 250ml of rice gruel half an hour before the procedure. *Yavagupana* brings *Utkleshana* of *doshas* and *Sonita vilayana* (decreases the viscosity of blood) due to *Swedana* and *Dravoshna* property, which facilitates easy flow of blood. *Yavagu pana* also has benefits like strengthening digestive fire, prevent hypoglycemia, improves immunity and helps in detoxification of body.

External *Snehana* was done with *Dhanwantharam thailam. Snehana* induces *Utkleshana* of *Doshas* and *Dhanwantara taila* has *Sarva vatahara* property. *Swedana* was done with hot water which helps in *Vilayana* of *Doshas* and increase microcirculation.

Main aim of *Sirvyadha* is *Prakupitha Doshanirharana*. All these pre-operative procedures help in proper elimination of *Dosha* by *Siravedha*.

Selection of site

The specific veins described for puncturing in different parts of the body have special affinity to decongest the organ or part and stimulate it to reorganize due to its closed proximity to the affected areas.

Superficial veins are more preferred for *Siravedha*. Because these are not paired with an artery, unlike the deep veins. They are important physiologically for cooling of the body. When the body is too hot the body shunts blood from the deep veins to the superficial veins to facilitate heat transfer to the surroundings. These are also easily accessible for bloodletting.

In *Vishwachi,* the site mentioned for *Siravedha* is 4 *Angula* above or below *Koorpara sandhi*. The major vein that is superficial in this region and becomes prominent with the application of pressure is cephalic vein. 2 sites mentioning may be due to the fact that median cubital vein which is a superficial vein overlying bicipital aponeurosis in the roof of cubital fossa shows variable forms of joining the cephalic vein to basilic vein - H type or M type. Hence cephalic vein can be selected for *Siravedha* after considering the prominence of vein.

Paschat karma

There is a chance for *Vata kopa* and *Mandhagni* after the procedure. So *Vata kapha vardhaka nidanas* and indigestion are said to be avoided and take *Na ati seeta, Snigtha,* easily digestible and *Sonita vardhaka* food after the procedure.

Probable Mode of Action

The principle of venesection is to remove adequate amount of blood in a controlled way. Remarkable change in clinical picture is noticed immediately after the procedure. This may be due to sudden decompression of the pinched nerve root at the cervical region. The overloaded capillaries are relieved immediately after the procedure. There is also evident improvement in clinical picture is noticed throughout the follow up period. The relief obtained is also seems to be persisting throughout the study period. Venesection can inhibit production of pro inflammatory cytokines and thereby relieve the symptoms. At the end of follow up period the patient was asymptomatic. *Siravedha* is beneficial in *sopha* caused by *Anubandha dosha dushyas*, which obstruct normal *Gati* of *Vata*. *Siravedha* can remove such obstruction and *Anuloma gati* of vitiated *Vata* can be obtained.

CONCLUSION

The current case study reveals the effect of *Siravyadha* in reducing symptoms of cervical radiculopathy. *Siravyadha* can reduce considerably radiating pain and numbness in cervical radiculopathy. There is remarkable reduction in severity of complaints immediately after the procedure. After 28 days the patient had no symptoms of cervical radiculopathy. In short, *Siravyadha* is the most effective treatment procedure in cervical radiculopathy.

It is hoped that the observations attained may pave for further studies like for how much duration the patient will be free of symptoms of cervical radiculopathy after the procedure.

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