

## Physio-Anatomical Exploration of *Sirobasti* in Management of Neurological disorders.

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### Abstract

Neurological disorders are medically defined as disorders that affect the brain as well as the nerves found throughout the human body and the spinal cord. There are more than 600 diseases which can be categorised within this heading and the rate of occurrence of these diseases is increasing day by day. The treatment aspect of these diseases of modern medical science has their own limitations, but in *Ayurveda*, *Panchakarma* therapy treats these diseases very effectively. *Sirobasti* is a one of the therapeutic measures of *Panchakarma* therapy which is used to treat neurological disorders. The word "*Basti*" is used here to indicate, "to retain or to hold", thus in *Sirobasti* the oil is made to retain on the scalp for a prescribed time. The symptoms of vitiated *Vata* can be observed in neurological disorders. In *Sirobasti Karma*, used drug is absorbed through the venous system and reach up to the neuron level and rearranges its structural damage by rearranging *Vata* by its *Snigdhati Guna*. Thus *Sirobasti* is the procedure which can act on neuron level and can treat neurological disorders without any side effect and by minimal expense in view of non availability of suitable treatment modalities in the modern system of medicine.

### Keywords

*Sirobasti*, Neurological disorders, *Vatvrudhi*



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## INTRODUCTION

Physiological functions and pathological conditions of body is described in *Ayurveda* in the context of *Tridosha*- the three humours of the body. The primary principal of *Ayurveda* is to maintain the health of a person and the treatment aspect of the diseases is the secondary one<sup>1</sup>. In treatment aspect of disease *Aacharya* has described *Sodhana Chikitsa* which is a purification process of the body. The body purification presses are called *Panchakarma*.

*Sirobasti* is very important therapeutic measure of *Ayurveda*. It can be classified in *Bahya-Snehan Karma* which is a pre-therapeutic measure of main *Panchakarma*. *Aacharya Vagbhatta* has classified *Sirobasti* in *Murdha Taila* along with *Sirodhara*, *Sirobhayanga* and *Pichu*<sup>2</sup>. The word "*Basti*" is used here to indicate, "to retain or to hold", thus in *Sirobasti* the oil is made to retain on the scalp for a prescribed time. This procedure is highly effective in combating; insomnia, attention-deficit hyperactivity disorders (ADHD), Alzheimer's disease, psychological disorders, mental stress, facial paralysis and other neurological problems. This technique is very famous in *Keralliyana Panchakarma*.

### Materials required for *Sirobasti*:-

Rexene/ leather (*Charmapatta*) (75cm-20 cm) - 1,  
Black Gram flour (*Masha*) - 200gm,  
*Taila* - 1.5 litre,  
Cotton ribbon (120cm-10cm) -2strips,  
Spoon -1, Vessel - 1,  
Oil for *Abhayanga* - 100ml,  
Soft towel -2,  
Hot water bath - 1, Armed chair of knee-height - 1, Therapist - 2,

### Procedure of *Sirobasti*

*Sirobasti* procedure can be described further under these headings;

***Purva Karma***:- Cleanly shaved head is required to carry out this procedure. Morning hour at the time of sunrise is the ideal time for *Shirobasti*.

***Sambhar Sangraha*** :- It includes the preparation of the *Charmapatta* (leather strap) and *Masha* (black gram) pasted to the *Charmapatta* and two cotton ribbons 48inch× 4 inch or 120 cm× 10cm.

### ***Pradhana Karma* :-**

It includes; 1. *Bastiyantara Dharana*, 2. *Taila Dharana*, 3. Observation of *Samyaka Yoga Lakshana*, 4. Removal of *Taila* and *Basti Yantra*.

1. *Bastiyantara Dharana*:- Patient is made to sit erect on a chair; one strip of cloth smeared in *Mashakalka* is pasted around the

head above the ear. Then leather sheet of about 12 *Angula*<sup>3</sup>, applied with *Masakalka* at the bottom of the inner surface, is tied around the head so that the lower part of the leather sheet is attached to the strip of the cloth. The two ends of the leather sheet are attached together by using *Mashakalka*. Another strip of cloth pasted with *Mashakalka* is wrapped on the leather sheet. Now the *Basti-Yantra* is ready.

2. *Taila Dharana*:- Then the suitable medicated oil warmed by keeping in hot water is poured on the inner surface of leather cap slowly and carefully. The quantity of oil should be two *Angula* above the scalp<sup>4</sup>. Care must be taken to keep the temperature of oil constant.

3. Observation of *Samyaka Yoga Lakshana*:- Time should be according to the predominance of *Dosha* or appearance of *Samyak Snigdha Lakshana* such as *Vaktrastrava* ( watering in mouth), *Nasikotklesh* (moisture in nose), *Karna Strava* etc. Time according to *Dosha* is as follows,

In *Vata* predominance diseases 10,000 *Matrakala*, in *Pitta* predominance diseases 8,000 *Matrakala*, in *Kapha* predominance diseases 6,000 *Matralkala*, in *Svastha* 1,000 *Matrakala* of *Sirobasti* should be done<sup>5</sup>.

4. Removal of *Taila* and *Basti Yantra* :- After the prescribed time for *Karma* the oil from the *Bastiyant*, and *Bastiyantra* should be removed .

***Paschat Karma*:**

*Mridu Abhayang* is done over the head and *Skanda Pradesha*<sup>6</sup>.

**Duration:**

Maximum duration of *Sirobasti* is considered as seven consecutive days<sup>7</sup>.

**The relation between *Vatavruddhi* and Neurological disorders.**

Before understanding the role of *Sirobasti* in Neurological disorders we must understand the relation of the *Vata* and the nervous system, because the *Vata* mostly resembles with nervous system and in *Vatvyadhi* we mostly find the symptoms related to nervous system.

"The nerve tissue is composed of 65-85% of water and rest of the solid materials. In white matter solid tissue portion is about 30% whereas in grey matter solid tissue portion is just 16.5%. The solid portion of tissue is consist of 51% of nucleo-proteins, fat (cholesterol 47%, lecithin 9.8%, cephalin 23.7% and galactoside 6%), various salts and extractives"<sup>8</sup>.

It will be seen from the factual data provided above that the nerve fibre is composed,

mainly, of nucleoproteins and fat-like materials, the physical properties of which may be explained as *Snigdha*, *Guru*, *Madhura*, *Manda*, *Slakshana*, *Mridu*, *Pichchhil* and *Sthira* etc.

A deficit of their properties which represent substances, such as those mentioned above, may be logically expected to give way to properties opposite of them viz, *Rukshadi gunas*, resulting in the manifestation of nervous disturbances, corresponding to the *Prakopa* of *Vata*. It should be noted that *Vata Samana* is stated to be achieved by the use of substances which possesses *Snigdhadi guna*<sup>2</sup>. By inference, it would come into view that the normal function stated of *Sharir Vata* depend, to a large extent, upon substances which possess these *Gunas*. In other word it may be stated that the qualities of substances which create the structure of the vehicle of *Sharira Vayu* are *Snigdhadi Guna*. It will follow from this that the *Rukshadi guna* characteristic to *Sharira Vata* may refer to the vehicle which may have suffered a deficit of its structural constituents, manifesting, in consequence, abnormal states of its functioning.

### **Mechanism of Sirobasti in Neurological Disorders**

- Probable root of oil absorbance:-

In *Sirobasti* medicated oil is poured over the head. The oil used in *Sirobasti* is absorbed into the scalp through the roots of hairs. "The scalp consists of five layers that are firmly bound together: Skin, Connective tissue, Epicranial aponeurosis, loose connective tissue, Pericranium. The dense subcutaneous tissue containing the vessels and nerves of the scalp. In the loose areolar tissue of scalp, emissary veins are present"<sup>9</sup>. These are valve less and connect the superficial veins of the scalp with the diploic veins of the skull bones and with the intracranial sinuses. This is a probable route of absorption of the *Basti dravya*.

- Effect of the *Sneha* used in procedure  
As we have discussed further in the *Vat Vyadhi* the structure of the neuron is damaged and in all psychological disorders *Vat Dosha* is dominant because it damage the neurons and due to the structural damage diseases are occurs. In *Sirobasti* procedure we mostly use the medicated oils, milk or *Ghrita*. Thus all the products use in this *Karma* have *Vat Samak gunas* as *Snigdha*, *Guru*, *Ushana*, *Pichchhil*, *Slakshana* etc. Thus, in *Sirobasti Karma* used drug is absorbed by the venous system and reach up to the neuron level and rearranges its

structural damage thus reduces *Vayu* by its *Snigdhadhi guna* and treats the diseases.

▪ Effect of Procedure

The *Sukhooshna Dravya* is usually used for *Shirodhara*, which stimulates the efferent blood vessels and causes vasodilatation. Pressure is produced on the head due to *Basti dravya* which makes tranquilizing effect and relaxes patient. Pressure improves blood circulation, increases fresh oxygen and glucose supply to the brain and relaxes muscles and nerve endings

▪ Effect of *Abhayang* after *Sirobasti*.

*Abhayang* is the *Paschatkarma* of the *Sirobasti* procedure in which massage is done from the top of the head to the shoulder region. By massage the lymph movement is possible and the lymph drainage is increased in the venous system. "The lymph contains large amount of tryptophan which is used by the pineal gland to secrete melatonin and serotonin which helps to maintain equilibrium of thyroid, gonadal and adrenal activity as well as the secretion of the growth hormone. Deficiency of serotonin is responsible for irritability, depression schizophrenia, florid hallucination, paranoia, severe headache, anxiety etc. Melatonin is responsible for sedation and pleasant feeling in the human

beings. So the manual draining of lymph by *Abhayang* may play a major role in the psychological disorders"<sup>10</sup>.

## DISCUSSION AND CONCLUSION

*Aacharya Vagbhatta* has mentioned *Sirobasti* in *Mastishkys* which is a form of *Bahya Snehana* of the body. This procedure is highly effective in *Vata* predominant diseases. This technique is very famous in *Keralliyan Panchakarma*.

- In *Sirobasti* according to dominance of a particular *Dosha*, along with *Sneha*; *Taila*, *Ghrita* and *Oushadhisiddha Kasayas* are used which shows medicinal effect.
- The temperature and pressure created through the *Basti-dravya* stimulates the efferent blood vessels and causes vasodilatation.
- Prolonged and continuous pressure of the *Basti-dravya* make tranquilising effect on the patient and relieves tension and stress.
- Pressure improves blood circulation, increases fresh oxygen and glucose supply to the brain and relaxes muscles and nerve endings.
- *Sirobasti* is the most effective therapy in various *Vatavyadhis*, *Shirogatavyadhis*, and *Manasvyadhis*.

- This procedure is highly effective in insomnia, headache, psychological disorders, mental stress, rejuvenation of sense organs, facial paralysis, dryness of nostrils, mouth and throat and other *Vata* predominant diseases.
- In *Sirobasti Karma* used drug is absorbed by the venous system and reach up to the neuron level and rearranges its structural damage thus reduces *Vayu* by its *Snigdhadiguna* and treat the neurological disorders diseases.
- Thus the conclusion is that *Sirobasti* is the procedure which can act on the neuron level and can treats various *Vata Vyadhi* and neurological disorders without any side effect and by minimal expense in view of non availability of suitable treatment modalities in the modern system of medicine..

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