



A GLIMPSE ON SIRAVYADHA – THE WONDER TOOL OF SHALYATANTRA: A REVIEW

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ABSTRACT

Siravyadha is an important treatment modality explained in the classics of Ayurveda. *Acharya Vagbhata* in *Ashtanga Hridaya* has mentioned *Asravisruti* or bloodletting as one among the *Panchakarmas* or 5 purificatory measures. *Siravyadha* proves its benefits ranging from *Vatavyadhis* to numerous diseases of surgical importance. This treatment modality was once considered at the zenith, but later ages showed its decline due to various reasons. All the classics are keenly examined for the perfect understanding of deeper elements of *Siravyadha*. Indications and contra indications, the type of the instrument to be used, site to be punctured in various diseases, signs of proper and improper *Siravyadha*, quantity of blood to be withdrawn, post procedure care are explained in series. Pathophysiological studies reveal the immunological, inflammatory and physiological responses in the body following a considerable blood loss of more than 100ml eventually has its effects on various systems of human body. Even though the reach of the procedure is quite vast, for some reasons it is seldom practiced by most of the Ayurvedic Surgeons. This article is aimed at throwing light on the importance of *Siravyadha*, its practical implications and also to bring back the lost glory to this treatment procedure so that the principles of Ayurveda find new heights in the future days.

Keywords. *Keywords: Siravyadha, Asravisruti, Bloodletting*

INTRODUCTION: *Siravyadha* as the word indicates refers to the puncturing or *vyadhana* of *siras* or in other words it implies to bloodletting. It is an important treatment modality as per the classics of Ayurveda. *Acharya Vagbhata* has included *Asravisruti* or bloodletting among the 5 purificatory measures or *Panchakarma*¹. It is helpful in clearing the *doshas* accumulated in the body. *Acharya Sushruta* has explained *Siravyadha* for the management of numerous disorders in the treatise. He has also quoted that the skin diseases, various cysts or swellings and the diseases caused due to *Rakta dhatu* will not affect the persons who have undergone bloodletting therapy². This proves the weightage and importance of this treatment modality. But due to various reasons

the wonder tool of treatment has lost its glory in the current day practice.

The mentioning of *Siravyadha* from various *Vatavyadhis* like *Padadaha*, *Pangu* etc to diseases of surgical importance like *Udara*, *Vidradhi* etc shows the wide implication of this treatment modality during the good old days. Once at the zenith, why has it taken a regression graph in successive days? A deep dive into the history reveals certain key points, the spread of Buddhism and Jainism, who believed in the principles of Ahimsa, branded this treatment as an act of violence and regarded it as forbidden and unethical. During those days Ayurveda was taught from generations to generations. Many a times due to lack of communication between the members of the family or due to inade-

quate passage of information to the next, lacunas developed in proper understanding and propagation of this treatment method. Another probable reason for the decline of this treatment modality could be the sense of inferiority shown to those who were dealing with blood and other body fluids by the superior caste. Hence fewer people were indulged in such practices and gradually led to the downfall of the treatment method.

Later on by the advancements in the field of Medical sciences, surgery gained much importance. The principles of *Acharya Sushruta* serve as the base for almost all the surgical procedures till date. But the Ayurvedic fraternity of the current era is yet to explore the wide benefits of *Siravyadha*. This may be due to the fact that we are unable to grasp the actual concept of *Sira* according *Acharya Sushruta*. Having a wonder tool in our bags, we are searching for better mode of treatments. This article is framed with an intention to create an awareness regarding the vast benefits of *Siravyadha* along with practical application methods.

The act of withdrawing blood from the subjects to cure an illness or a disease is termed as Bloodletting. This practice was initiated by the Egyptians in 1000BC to remove the bad humors from the body. It is claimed to have been the most common medical practice performed by surgeons from antiquity. In 19th century BC it was employed in numerous diseases like acne, asthma, cancer, convulsions, epilepsy, gout, gangrene, herpes, indigestion, leprosy, plague, pneumonia, stroke, tetanus, etc and also in most forms of excessive bleeding like epistaxis, menorrhagia, or haemorrhoidal bleeding. There was also a practice of removal of certain quantity of blood before surgeries or child birth as a

measure to control inflammation. In the current era Therapeutic Phlebotomy is more aptly correlated to *Siravyadha* where a unit of blood is drawn as a measure in various diseases. Even today the practice of Phlebotomy is the treatment of choice in Hereditary Hemochromatosis, Polycythemia vera, Porphyria cutanea tarda (PCT), Insulin resistance – associated Hepatic Iron over load (IR-HIO), Peripheral Arterial Disease (PAD) etc.

Among the types of *Raktamokshana*, *Siravyadha* is carried out when there is generalized *Dushta rakta*, whereas *Pracchana* is done *doshas* are localized. *Jalouka* is made use of to drain *granthibhoota dushita rakta* and *Shrunga* in case where *Dushita rakta* causes numbness or *Supti*³. Though there are proved benefits for this therapy in our science as well as the contemporary, well cited explanations available to carry out the procedure and rigorous researches being conducted in the field, *Siravyadha* has not reserved its place among the regularly used treatment protocols for some reason. This work is intended to throw light into understanding benefits of *Siravyadha*, its mode of action and also to popularize this modality among all the practitioners of Ayurveda.

INDICATIONS:As per *Acharya Vagbhata* when all the treatment protocols of *Sheeta*, *Ushna*, *Snigdha* and *Ruksha* fails to tackle the disease, then it has to be understood that the disease is caused by the vitiation of *Rakta* and *Siravyadhana* has to be carried out⁴. The procedure is indicated in days which are neither too cold nor too hot, too windy or cloudy.

Contraindications: The first and foremost contra indication for *Siravyadha* is healthy individuals. It should not be done after the patient has had full meals, has not undergone *Swedana* or sudation. The other

set of individuals who are forbidden from doing *Siravyadha* are those who are afflicted with *Mada*(intoxication), *Murcha* (syncope), *Shrama* (tiredness), Non expulsion of *Vata*, *pureesha* and *mutra*, and the individual who is sleepy since there are chances of decreased flow of blood after *Siravyadha* ⁵.

Certain group of individuals like children below the age of 16years, old aged above the age of 70years, suffering from other bleeding disorders, individuals who are *Ruksha* (Dehydrated), *Kshata ksheena* (emaciated due to any injury to the chest), *Bheeru* (coward), *Parishranta* (exhausted), *Madyapa* (accustomed to alcohol), *Adhwa* and *Sthree karshita* (emaciated due to walking or sexual activity), undergone *Shodhana* therapy, weak, *Kleeba* (sterile), women in their pregnancy and post natal period are also contra indicated for *Siravyadha* ⁶. The procedure should not be done in people afflicted with *Kasa*, *Shwasa*, *Shosha*, *Pravruddha jwara*, *Akshepaka*, *Pakshaghata*, *Pipasa*, *Atisara*, *Udara*, *Chardi*, *Pandu*, *Sarvanga Shopha*, *Arshas*, *Upavasa* (observing fast), *Ksheena* or emaciated due to *Amla bhojana*.

Acharyas even though have enlisted a large group of individuals who are contra indicated for *Siravyadha*, in exceptional situations of emergency and poisoning even the contraindicated individuals can be subjected to *Siravyadha* with necessary precautions ⁷.

Instruments Used *Vrihimukha shastra* is used for *Siravyadha* in muscular regions. Its *matra* is as deep as a rice grain or *Vrihi matra* or half of a barley grain (*Ardha yava matra*). It could be compared to the Trocar and Canula. *Kutharika* which is an axe shaped knife is mentioned in classics for *vyadhana* of *siras* appearing above the bones, as deep as half of a barley grain (*Ardha yava matra*) ⁸

In current day practice 18-27 bore, 21-23-gauge needles, scalp vein set or winged infusion set could be used for *Siravyadha*.

Procedure: As a *Poorvakarma*, the patient has to undergo *Sthanika* or local *Snehana* and *Swedana* (Oleation and Sudation), followed by *Yavagu* (liquid diet) to promote the *Utkleshana* of *Rakta* by the *drava* quality of the diet ⁹. The concept behind giving *Yavagu* before *Siravyadha* is also to maintain the fluid level in the body during the procedure. The patient may be asked to take the *Yavagu* made of *Tila* or Sesame seeds, which is *Sadyo snehana* and produces the *Utkleshana* of *rakta*. The *sira* pertaining to the particular disease has to be chosen avoiding the *marmas*, marked and fixed with *Vastra* (cloth), *Charma* (skin) , *Lata* (climbers) or *Antarvalkala* (inner bark of trees) which may be interpreted as the tourniquet. Using appropriate instrument depending upon the area, *Siravyadha* has to be carried out.



Fig 1 Siravyadha done on Upper limb



Fig 2. Siravyadha done on Lower limb

Acharya Sushruta has mentioned about the positions for conducting *Siravyadha* for various regions namely above the clavicle, abdomen, thorax, upper and lower extremities (Fig 1 & 2) . There are also mentioning about the specific region for *Siravyadha* in various diseases like *Gridhrasi*, *Vishwachi*, *Mutravriddhi*, *Karna roga*, *Nasa roga*, *Mukha roga*, *Shiro roga*, *Unmada*, *Apasmara*, *Vidradhi*, *Jwara*, *Pravahika*, *Galaganda*, *Apachi*, *Vatavyadhi*, *Chippa*, *Udara* etc.

Signs of properly done Siravyadha

By proper application of the instrument the blood flows as a stream for one *Muhurta* (approximately 48minutes) and stops by its own¹⁰. Acharya Sushruta has also quoted that the patient feels lightness of the body, decrease in the intensity of pain and disease and also mental pleasure after a proper procedure of *Siravyadha*.

Pramana or quantity of blood to be drawn

The maximum quantity of blood that can be drained by *Siravyadha* is One *Prastha*, which is equal to 13.5pala or 540 ml. Even though One *Prastha* is equal to 16 *palas*, In the context of *Shodhana*, Acharya Vagbhata has clearly mentioned that one

Prastha has to be interpreted as 13.5 *pala*¹¹.

Signs of improper Siravyadha

Acharya Vagbhata has quoted two conditions of improper *Siravyadha*, characterized by decreased and increased outflow of blood followed by *Vyadhana*. Vagbhata has also told the various measures to facilitate the bleeding in case of decreased blood flow and emergency steps to control the bleeding in cases of excessive flow of blood. There is also references regarding the usage of blood of various animals like *Ena*, *Harina*, *Shasha*, *Mahisha* etc for *pana*¹² to compensate the depleted fluid volume. This could be regarded as the primitive measures of Blood Transfusion.

Acharya Sushruta has also enumerated 20 types of defective puncturing and their salient features. Such defective procedures could be the probable reason for explaining the 4fold measures to control bleeding namely *Sandhana*, *Skandhana*, *Pachana* and *Dahana*¹³.

During the procedure, it should be noted that the vitiated blood flows out initially like yellow sap from *Kusumbha pushpa*. If the patient is of *Bahudoshavastha*, but is weak or faints during the ongoing procedure, then he may be

subjected for *Siravyadha* again in the afternoon, next day or the third day. The treatise also warns not to drain all the *doshas* at once, but to retain a small portion of it and tackle it down with internal medication for the fear of causing *Dhatu kshaya*.

Acharya Sushruta concludes the explanation of *Siravyadha* by quoting that it is a complex task to carry out the procedure of *Siravyadha* as the *siras* keep on changing their position like fishes. Hence an extra note of caution is required while carrying out the procedure. He has advised to master the act of *Siravyadhana* by practicing it on *Mrita pashu sira* (blood vessels of dead animals) and *Utpala naala* (stalk of lotus) to avoid the defective puncturing while carrying it out in patients while explaining the *Yogyasutreeya adhyaya*¹⁴. *Acharya* also emphasizes that diseases do not get pacified quickly and completely with procedures like *Snehana* and *Lepana* etc as done by *Siravyadha*, thus glorifying the treatment method which is regarded as *Ardha Chikitsa* or half of the therapeutic management in *Shalyatantra*, occupying same place as a properly administered *Basti* or enema in *Kayachikitsa*¹⁵.

Post *Siravyadha* Instructions

There is also mentioning regarding the regimens to be followed after the procedure of *Siravyadha*. The patient is advised to abstain from anger, exertion, sexual activity, day sleep, excessive acts of speaking, physical strain, travel, reading, standing, sitting, walking, exposure to cold, wind and sun and intake of unwholesome food for a period of one month till the strength of the body is regained. These activities if carried out may cause the vitiation of *Vata dosha* and also the further depletion of *Dhatu*s

leading to complications in the patient undergone *Shodhana*. Hence to be advised to the patient as the regimen to be followed. The patient should also resort to neither too hot nor too cold, light food and drinks which does the kindling of the digestive fire¹⁶ thus protecting the patient from the formation of *Ama* or undigested food and its complications.

Mode of action

Rakta is considered as one among the 10 *Pranayatana*s by *Acharya Charaka* and its function is *Jivana* or to provide life. *Rakta* doesn't undergo vitiation on its own and it associates with the *Tridoshas* and gets vitiated. *Raktamokshana* is predominantly indicated in *pitta*, *rakta* and *kaphaja vyadhi* or when *pitta* or *kapha* is in *anubandha* to *vata dosha*. In *Vata prakopa* resulting due to *kapha* and *pitta avarana*, *Raktamokshana* can help to remove the *avarana* of *pitta* and *kapha dosha* giving way for *anuloma gati* of vitiated *vata* that indirectly cures the symptoms. In a combined vitiation of *doshas*, *Pitta* should be treated first. As *Pitta* and *rakta* shares *Asraya Ashrayi Sambhandha*, *Siravyadha* helps in removing the vitiated *rakta* and also showing its impact on *Pitta*. Since *Pitta* is also considered as the mala of *rakta*, by removing vitiated *rakta* the *Asuddha rakta* is removed hence paving way for the formation of *Shuddha rakta*.¹⁷

Various bloodletting techniques were in practice from antiquity around the globe. From simple diseases to the complicated ones, bloodletting was practiced prophylactically and therapeutically in various conditions. Pathophysiological studies reveal that after a considerable blood loss of more than 100ml, the immediate haemo dilution triggers a set of immunological,

inflammatory and physiological responses to make the body alert and adaptive to the situation. Also the Psycho-Neuro-Endocrinal mechanisms mediated by Hypothalamus, Pituitary, and Adrenocortic axis are triggered and the brain responds with commanding actions through efferent signals to vessel or vascular system. As a result the metabolism is kindled up, local blood supply and drainage is improved, fresh and active RBCs are produced.¹⁸

DISCUSSION: *Siravyadha* is considered as one of the methods among *Raktamokshana*, advised for generalized or *Vyapita doshas*. Abnormalities in *Rakta dhatu* can result in various diseases. *Rakta dhatu* undergoes vitiation in association with the *Tridoshas* and hence the removal of *rakta* as a therapeutic measure not only acts on *Rakta* but also cures the abnormalities in the *Tridoshas*. *Siravyadha* also cures the *avarana* caused by *Kapha* and *Pitta* in *siras* resulting in *Vata prakopa*. It is regarded as *Ardha Chikitsa* or half of the therapeutic measures in *Shalya tantra* due to its vast explained benefits. Even though the detailed explanations are available in the classics, it is very rarely practiced in the current era. The various causes for the decline as well as diminished usage in practice were analyzed. *Acharyas* have quoted the *Poorvakarma*, *Pradhana karma* and *Paschat karma* of *Siravyadha* and their respective treatments in treatises. The effectiveness of *Siravyadha* is explored in various diseases like *Gridhrasi*, *Vatarakta*, *Katigata vata*, *Vipadika*, *Vicharchika*, *Siraja granthi*, *Kroshtuka shirsha*, Chronic Unhealed Venous ulcers, Tennis elbow etc under various studies conducted. Imparting adequate knowledge to the upcoming students and practitioners, creating awareness regarding the benefits

of *Siravyadha* to the practitioners and public would certainly bring back the lost glory to this wonder tool of *Shalyatantra* in future days.

CONCLUSION: *Siravyadha* regarded as the *Ardha Chikitsa* or half of the treatment in *Shalyatantra* depicts the wide implication of this treatment modality in tackling the various diseases of physical and psychological origin. The scope of *Siravyadha* has been established in the studies undertaken by the ayurvedic scholars in various conditions like *Gridhrasi*, *Vatarakta*, *Katigata vata*, *Vipadika*, *Vicharchika*, *Siraja granthi*, *Kroshtuka shirsha*, Chronic Unhealed Venous ulcers, Tennis elbow etc. *Acharyas* have given utmost importance to this treatment modality as it deals with *Rakta* which is the *moola* of *Deha*, which helps in sustaining life and all possible efforts are to be made to protect it. *Acharya Sushruta* has quoted the capability of *Siravyadha* and its complete and fast curing of diseases unlike other treatment modalities. It is told that skin disorders, various cysts, swellings and diseases caused by *Rakta* will not recur if bloodletting is carried out.

Acharya Sushruta being a personality of explicit knowledge has sensed the present scenario and has narrated about the complexity in carrying out *Siravyadha*, as it needs regular practice and expertise to master the act of identifying the *Siras* which keeps on changing their position like fishes. Being the followers of *Sushruta's* school of thoughts we ought to familiarize, practice and propagate this wonder tool of *Shalyatantra* to the forthcoming generations.

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Source of support: Nil Conflict of interest:
None Declared

Cite this Article as : [Aishwarya et al : A Glimpse on Siravyadha – The Wonder Tool of Shalyatantra: A Review] www.ijaar.in : IJAAR VOLUME IV ISSUE VIII MAY–JUNE 2020 Page No- 876-882