A GLIMPSE ON SIRAVYADHA – THE WONDER TOOL OF SHALYTANTRA: 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to be used, site to be punctured in various diseases, signs of proper and improper Siravyadha, quantity of blood to be withdrawn, post procedure care are explained in series.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 sira 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 Panchakarma1. 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 granthibhootha dushita rakta and Shrunga in case where Dushita rakta causes numbness or Supti. 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 out. 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.

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 Shhree 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. The procedure should not be done in people afflicted with Kasa, Shwasa, Shosha, Pravruddha jwara, Aksamepaka, Pakshaghata, Pipasa, Atisara, Udara, Chardi, Pandu, Sarvanga Shopha, Arshas, Upavasa (observing fast), Ksheena or emaciated due to Amla bhohjana.

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.

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

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. 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.
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, Mutravriddi, 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 Muhurt (approximately 48 minutes) and stops by its own. 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 13.5 pala 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.

**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 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.

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 Bahudosha avastha, 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 adhyaya14. 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 Kayachikitsa15.

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 Dhatus 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 Pranayatanas 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. Pathophysiologisal 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 Adrenocortical 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.\textsuperscript{18}

**DISCUSSION:** Siravyadha is considered as one of the methods among Raktamokshana, advised for generalized or Vyapita doshas. Abnormalities in Rakta dhatu can results in various diseases. Rakta dhatu undergoes vitiatiion 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 sirs 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 Gridhram, 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 Siravayadha has been established in the studies undertaken by the ayurvedic scholars in various conditions like Gridhram, 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 forth coming generations.

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