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Role of *Raktamokshana* (*Siravedhana*) in pain management

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Abstract

Acharya Sushruta considered *Siravedhana* as half of all the therapeutic measures (*Ardhachikitsa*) in *Shalya Tantra* like *Basti Karma* in *KayaChikitsa*. *Siravedha* is mentioned as a surgical procedure of puncturing the vein and accomplishing the *Raktamokshana* (Blood-letting). It is very prominent procedure used for the management of those diseases in which there is vitiation of *Rakta dhatu*. Conditions in which *Rakta dhatu* is predominantly vitiated along with other *doshas* are easily curable with the help of *Raktamokshana*. *Acharya* has emphasized that *Siravedhana* helps in the elimination of vitiated dosha from the veins. They clarified that in emergency if due to lack of the time one cannot be able to perform the fivefold purification procedures, *Raktamokshana* will serve the purpose. They specially mentioned about *Siravedhana* in surgical conditions with poor venous drainage. It leads immediate alleviation of symptoms along with pain in various diseases like *Vatarakta*, *Gridhrasi* etc. where ever *Raktamokshana* is indicated, *Siravedhana* is an important technique to do so. My paper is focused on effect of *Siravedhana* in the management of pain in certain disorders.

Aim

To evaluate and observe the effect of *Raktamokshana* (*Siravedhana*) in the management of pain.

Keywords: *Raktamoksha*; *Siravedhana*; *Asrakmokshana*; Pain management; Blood-letting; Therapeutic phlebotomy; venesection.

1. Introduction

Shalya Tantra the ancient *Ayurvedic* surgical science is one of the most efficient branches in *Ashtang Ayurved* (among eight major branches) as mentioned in many texts. *Sushruta Samhita* written by the great *Acharya Sushruta*, is in-depth treasure-house of surgical knowledge. The contribution of *Acharya Sushruta* in ancient surgery is long lasting. The concepts and techniques used by *Acharya Sushruta* in past are even relevant in today's era with little amendments. *Acharya Sushruta* has described *Siravyadha* (a type of *Raktamokshana*) as *Ardha Chikitsa* in *Shalya Tantra*¹. In such conditions where pain and redness is the main symptom, *Siravedhana* is the treatment of choice for that because it relieves from them immediately². In most of the patients pain is one of the chief causes for visiting a doctor. It is known as *Ruja* in *Ayurved* which is one of the synonyms of disease. It affects and disturbs the physical and mental status of patients. Pain is cardinal symptom in most of the *Vyadhi* (Disease). According to the principles of *Ayurved* all types of pains are *Vataja* in nature and can be corrected by correction of *Vatika* derangements in the body. *Siravedhana* is clearly mentioned by *Acharya* while describing the line of treatment of many *Vata Vyadhi*. *Acharya Sushruta* mentioned when *Vata* is found affecting the skin, muscles, blood, veins and arteries then therapies such as *Snehana* (oleation), *Abhyanga* (oil bath), *Upanaha* (warm poultice), *Mardana* (massage), *Alepa* (applying paste on skin) and *Asrakmokshana* (Bloodletting) should be adopted³.

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2. Types and importance of *raktamokshana*

Raktamokshana (bloodletting) is a procedure of withdrawal of blood from a patient to cure or prevent from the disease. In modern medicine bloodletting is known as phlebotomy. Therapeutic phlebotomy used in few circumstances such as polycythemia vera, porphyria cutanea tarda etc, to reduce the number of red blood cells. Bloodletting is also practiced and an important part of *Unani, Ayurved, traditional Chinese and Hildegard medicine system*. *Acharya Sushruta* mentioned *Raktamokshana* among one of the five basic techniques of detoxification (*Panchakarma* procedures). As the name, it is made of two words, *Rakta* which stands for blood and *Mokshana* i.e to leave or expel out, so as per this the literary meaning of *Raktamokshana* is 'to let out blood'. It is the only method of detoxification in which the vitiated *doshas* are taken out from *Sakhas* by creating an artificial route, by which we can carefully remove considerable amount of blood.

As per the text we can divide the *Raktamokshana* in mainly two types i.e. *Shastra Visravana* and *Anushtra Visravana*, which can be further divided in different sub-types as follows –

- *Shastra Visravana*: This can be achieved by using metal instruments. Further it can be divided into two sub-types –
 - *Pracchana* (Bloodletting by multiple incisions)
 - *Siravyadha* (Venepuncture)
- *Anushtra Visravana*: This is performed without the use of metal instruments. Further it is divided into three sub-types as follows –
 - *Shrungavacharana* (Sucking through horn) – indicated mainly in *Vata dushti*.
 - *Jalaukavacharana* (Application of Leeches) – indicated mainly in *Pitta dushti*.
 - *Alabu* (Vacuum extraction by using *Alabu/Bottle Gourd*) – indicated mainly in *Kapha dushti*.

Amongst all the types, *Siravyadha* (Venepuncture) is mentioned as best way of bloodletting with greater therapeutic values⁴.

2.1. *Siravedhana*

It is a surgical procedure of puncturing the vein for therapeutic purpose and there by accomplishing the *Raktamokshana*. It is indicated in all conditions where *Raktamokshana* is indicated. Even then, in certain disease *Siravedhana* has edge over other method of *Raktamokshana*. It is indicated in physically strong and courageous people. Morbidity of *Rakta dhatu* when generalized is best treated by *Siravedhana*⁵.

3. Classical review in the text in *sushruta samhita*

According to *Acharya Sushruta*, diseases in which *Snehana, Lepadi* therapeutic measures doesn't work up to the mark, we can perform *Siravedhana* as an emergency for instant management and desirable effect⁶. *Panchakarma* therapies are used for the purification of vitiated *doshas*, whereas *Siravedhana* is used to expel out vitiated *doshas* along with *Rakta dhatu*, where *Rakta dhatu* is predominant. *Acharya Sushruta* mentioned *Rakta* as fourth *dosha*, vitiated *Rakta* from the related veins should be let out to protect the health or to remove the disease⁷. We can find the symptoms like *Laghavama* (freshness of the body and painful area) and *Vedanashanti* (pain reduction) by well-organized *Siravedhana*. It means the pain arising from a disease condition get subsided followed by decrease in the symptoms of the disease, so *Siravedhana* can be use in those diseases where pain is the predominant factor⁸.

3.1. In *ashtang sangraha*

In this text the importance and efficacy of *Siravedhana* can be understood by an example as follows ; As water comes out and the plants dies on cutting the borders of a field, vitiated blood comes out and the disease will be automatically cured on performing venepuncture⁹. If a disease does not subside even after exact and appropriate line of treatment, then it is to be thought as vitiated blood borne disease and should be treated by venesection.

3.2. In *ashtang hridaya*

While describing the features and qualities of *Raktamokshana* and diseases in which it can be performed, it is the treatment of choice stated for *Sadya Raagruja Samana*, means it alleviates pain and redness instantly.

4. Previous study in pain management

- Clinical evaluation of *Suchivedha* (A type of *Vyadhana Karma*) In Pain Management. In this study a sample size of 33 patients having joint pain, muscle pain and nerve pain conditions were treated with *Suchivedhana Karma* on multiple tender points shown maximum relief in pain in single sitting¹⁰.
 - Clinical study was undertaken to study the efficacy of *Siravedhana* in the management of pain in *Gridhrasi*. Sample sizes of 10 patients of *Gridhrasi*, having complaints of acute pain were selected. After *Siravedhana*, 3 patients were got cured, 6 & 1 got marked and moderate improvement respectively. After follow up 1 patient got cured, 8 & 1 got marked and moderate improvement respectively. Thus the data suggest that *Siravedhana* is effective in the management of pain in *Gridhrasi*¹¹.
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5. Discussion

5.1. Probable mode of action

In *Ayurved* use of particular therapy in a particular disease depends on its property like *Rasa*, *Guna* etc., treatment is nothing but correction of vitiated *dosha* to reinstate the *tridosha* equilibrium. *Siravedhana* acts predominantly on *Pitta*, *Rakta* and *Kaphaja vyadhi* or when *Pitta* and *Kapha* is in association with *Vata dosha*. In such conditions of *Vata prakopa* which leads due to *Avarana* of *Kapha* and *Pitta*, *Siravedhana* can remove the *Avarana* of *Kapha* and *Pitta dosha* and giving way for *Anulomana* indirectly this ultimately cures the *Vatika* symptoms along with *Pitta* or *Kapha dosha* and patients get instant relief from the pain¹².

As per the modern point of view, stimulation to large sensory fibres from peripheral tactile receptors depresses the transmission of pain signals either from the same area of the body or even from many segments. This results in local lateral inhibition¹².

6. Conclusion

- *Siravedhana* is a simple, cheap, safe and effective treatment modality in the management of diseases which has pain as a major symptom.
 - In this procedure there is no need of hospitalization.
 - It can help and cure the disease when other treatment does not provide the desired result or when other treatment modality fails to provide immediate relief from the symptoms.
 - It is helpful to eliminate *doshas* directly from the *shakhas*, no need to bring them in *koshtha* like other purification methods.
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Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there was no conflict of interest regarding the publication of manuscript.

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