

Fundamental Aspects of *Shirogata Sira Marma*

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ABSTRACT

Ayurveda is a Medical science which deals with Physical and Mental health. The *Samhita* contains a complete account of health science for therapeutic and literature purpose. There are many chapters are describes in *Brihatrayi* and *Laghutrayi*, among all these topics *Marma* is an important topic for discussion especially classification of *Marma* and its clinical or applied aspects. *Shirogata Sira Marma* are either *Sadhyopranahara* and *Vaikalyakara* so proper knowledge of this is importance for preventive and therapeutic point of views. So, this article discusses the significance of *Shirogata Sira Marma*, whether they are *Sadhyopranhara* or *Vaikalyakara* and also discusses *Marma's* anatomical structure.

Key Words *Marma, Sira Marma, Phanamarma, Apangamarma, Shrugatakamarma, Sthapanimarma*

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INTRODUCTION

Ayurveda is a science of life, which believes in treating Mind, Body and Soul for ensuring a complete state of health and this ancient wisdom is well reflected in the unique concept and composition of *Marma*. These are vital part of the body. Any injury to the *Marma* leads to damage of the local structure, resulting in severe pain, loss of movement, deformity and sometimes there may be death¹. The *Marma* is the point that deals with critical body parts, and the person should avoid injuries in these areas. In *Ayurveda* it is included because every physician should have the knowledge of *Marma*. *Acharya Dalhana*, the *Teekakar* of *Sushruta Samhita* has opined that *Marma* it is the vital spots, if injured can cause death and must be prevented at the

time of Surgery². *Marma* is defined as the conglomeration of *Mamsa, Sira, Snayu, Asthi* and *Sandhi* where the *Prana* dwells³. In the first place, *Ayurveda* sages identified the regional anatomy as the *Shadantwa* meaning the whole body is divided into six parts, namely four *Shakha, Madhya, & Shira*⁴. *Acharya Dalhana* further illustrated the meaning of *Madhyam* as parts from *Kantha* to *Guda*, *Shakha* means both upper & lower extremities and remaining part is *Shira* i.e., head; but as per *Acharya Charaka*, the third division is *Shirogreva* which comprises of both head & neck region⁵. *Acharya Charaka* has also defined *Shira* as *Uttamanga* which comprises *Sarvaendriya & Prana* of humans⁶.

- *Shira* (head & neck) – controlling systems
- *Madhyam* (trunk) - maintenance system

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• *Shakha* (extremities) - locomotors system
As per opinion of different *Acharya*, *Shira* is most important as compared to *Madhyama* and *Shakha*. *Acharya Sushruta* mentioned five *Marmavastu* (*Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi*) but *Acharya Vagbhata* has also mentioned *Dhamani* as a sixth *Marmavastu*^{7,8}. *Sira* is main *Marmavastu* as compare to others. There are four *Marma* in *Shirogata Sira Marma* these are as follows.

1. *Phana Marma*
2. *Apanga Marma*
3. *Shringataka Marma*
4. *Sthapani Marma*

Aim and Objectives

1. To compile and find out the references related to *Shirogata Sira Marma* in *Samhita*.

Table 1 Description of *Phana Marma*

Number	02
Measurement	$\frac{1}{2}$ Angula ¹⁰
Types	<i>Shadanga Anusara</i> <i>Shirogata</i> ¹¹
	<i>Marma Vastuanusara</i> <i>Sira Marma</i> ¹²
	<i>Vikalpa Anusara</i> <i>Vaikalyakar Marma</i> ¹³
Location	<i>Sushruta</i> : <i>Marma</i> is situated interior to the Nasal cavity ¹⁴ <i>AstangaHrdaya</i> : On either side of the nostrils, ¹⁵ adjoining the opening of the ears, inside the throat. <i>AstangaSangraha</i> : inner to throat, on either side of the <i>Ghranamarga</i> and in relation to part of <i>karna</i> ¹⁶
Effect on injury	<i>GandhaAgyan</i> (Loss of Perception of Smell) ¹⁷
Regional anatomy ¹⁸	D.P.H. Sharma- Olfactory nerves Dr.Ghanekar- Olfactory region of nasal cavities Dr. R.R. Pathak – interior to the nasal cavity above to the auditory tube Dr.V.S. Patil- Olfactory bulb with its terminals

Injury at this *Marma* leads to the disability referred as *Gandhaagyan* (Anosmia). Anosmia is always because of involvement of olfactory nerve, better to consider *Phanamarma* as *Snayu Marma* rather than *Sira Marma*. Anatomical structures underlying this *Marma* are credibly

2. To Understand and discuss the concept of *Shirogata Sira Marma* in *Samhita* and Co-relate with modern anatomy.

MATERIALS AND METHODS

1. The literary material related to the *Shirogata Sira Marma* has been collected from various text books of *Ayurvedic Samhita*.
2. Modern anatomy text books, articles and papers published in indexed journals related to regional anatomy of head region which are relevant to the present study.

Phana Marma^{9, 10, 11, 12, 13, 14, 15, 16, 17}

Table no. 1

Phana Marma is considered by both *Acharya Sushruta* and *Vagbhata* where it is classified under *Vaikalyakara Marma* and *Sira Marma*¹⁸.

cribriform plate, olfactory nerve, and olfactory bulb.

Apanga Marma^{19,20,21}

Table no. 2

Apanga are among the *Vaikalyakara Marma*²² and *Sira Marma* of *Shira* which causes Blindness &

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Impaired vision²³. The Lacrimal glands should be considering as deep point at the site of *Apanga Marma* but superficially there are so many

structure that can be co-relate such as optic nerve, ciliary nerve, lacrimal nerve, abducent nerve, zygomatic temporal vessels²⁴.

Table 2 Description of *Apanga Marma*

Number	02	
Measurement	¹ / ₂ Angula	
Types	<i>Shadanga Anusara</i>	<i>Shirogata</i>
	<i>Marma Vastuanusara</i>	<i>Sira Marma Dhamani marma (Acco. to Vagbhata)</i>
	<i>Vikalpa Anusara</i>	<i>Vaikalyakar Marma</i>
Location	It is situated below the tail-end of the eyebrow lateral to the eyes. ²¹	
Effect on injury	<i>Aandhya</i> (Blindness) & <i>Drishti Upaghaata</i> (impaired vision)	
Regional anatomy ²²	D.P.H. Sharma- Outer Canthi. Dr. Ghanekar and Dr. D.G.thatte - Zygomatic temporal vessels. Dr. R.R. Pathak - Optic Nerve, ciliary nerve, Lacrimal nerve, Abducent nerve. Dr.V.S. Patil- Lacrimal gland	

Shringataka Marma^{25,26,27,28,29} (Table no. 3)

Shringataka Marma is one of the important *Shirogata Sira Marma* but *Acharya Vagbhata* considers as a *Dhamani Marma* besides that it is the *Sadhyopranahara Marma*³⁰. Though all the elements which comprise a *Marma* i.e. *Sandhi* (joints), *Mamsa* (muscles), *Asthi* (bones) and *Snayu* (ligaments and tendons) are all present in the site of these *Marma*, they are predominant in the *Sira* (blood vessels, veins) components

making up the *Shringaataka Marma*, therefore they are *Sira Marma*. As *Shringaataka Marma* gets affected, the impact of injury will mainly include the veins of the head compared to the degree of damage caused to other tissues, mainly those connected to the sense organs. The predominant anatomical structures are Cavernous and inter-cavernous sinuses. Other structures are ophthalmic nerve, supra orbital artery.

Table 3 Description of *Sringataka Marma*

Number	04 ²⁶	
Measurement	04 Angula	
Types ²⁷	<i>Shadanga Anusara</i>	<i>Shirogata</i>
	<i>Marma Vastuanusara</i>	<i>Sira Marma & Dhamani Marma (Acco. To Acharya Vagbhata)</i>
	<i>Vikalpa Anusara</i>	<i>Sadhyopraanahara Marma</i>
Location ²⁸	It is located at the meeting place of orifices of the tongue, nose, eyes, ear and palate	
Effect on injury ²⁹	Immediate death	
Regional anatomy ³⁰	Dr.Ghanekar and Dr. R.R. Pathak - Confluence of Cavernous and inter cavernous sinuses. Dr.V.S. Patil- Cavernous Sinus	

Sthapani Marma^{31,32,33,34,35,36,37}

Table no. 4

Sthapani Marma is a *Vishalyaghna Marma* and *Shirogata Sira Marma* which is located in between the eyebrows. Predominant anatomical structure is anterior end of superior sagittal sinus

attached to the crista galli, supraorbital and supratrochlear artery, anterior facial vein. Other structures are supra orbital nerve, frontal bone. *Sthapani Marma* is a *Vishalyagna Marma* because of that the person lives as long as the

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Shalya (foreign body) has not been removed from the *Marma* site wherein it had been impacted.

Table 4 Description of *Sthapani Marma*

Number	01	
Measurement	$\frac{1}{2}$ Angula ³³	
Types	<i>Shadanga Anusara</i>	<i>Shirogata</i> ³⁴
	<i>Marma Vastuanusara</i>	<i>Sira Marma</i> ³⁵
	<i>Vikalpa Anusara</i>	<i>Vishalyaghna Marma</i>
Location ³⁶	It is situated between the two eyebrows.	
Effect on injury ³⁷	Death when Foreign body impacted in them is removed.	
Regional anatomy ³⁸	D.P.H. Sharma- Frontal emissary veins. Dr.Ghanekar and Dr. R.R. Pathak- Glabella (Frontal veins are found to joining the sinus lying behind it). Dr.V.S. Patil- Anterior facial vein	

DISCUSSION

This is a Conceptual study of *Sira Marma* and *Dhamani Marma* of *Shira*. These *Marma* are 04 in number although these come under the *Vaikalyakar Marma*, *Vishalyaghna Marma* and *Sadhyopraanahara Marma*. These are *Sira Marma* so that there is plenty of blood circulation if any injury happens to this region maybe that's why our *Acharya* given more importance to these *Marma* even though in the present era Road traffic injury are very common so, it should be kept in our mind for prevent injuries to the vital point of head especially *Sira Marma*.

organ so that injury to the *Marma* can do permanent damage to the person.

CONCLUSION

Surgeons should have proper knowledge of all the *Marma* either *Shirogata* or else but it should be better knowledge of *Shirogata Sira Marma* because during any surgical procedure bleeding from artery or vein can interfere during the procedure/operation that's why properly knowledge of *Sira Marma* can prevent such complication. *Shirogata Sira Marma* are mainly associated either with brain function or sense

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