CRITICAL REVIEW OF PHANA MARMA WITH SPECIAL REFERENCE TO ANOSMIA

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ABSTRACT

Marma Sharira is an ancient traumatological anatomy presented by both Sushruta and Vagabhadha. Though the presentations are grossly similar, whereas Charaka given Trimarma. Phana Marma is considered as Vaikalyakara Marma, injury to this area leads to loss of sense of smell, which is located in head region plays an important role in clinical aspect during the head injuries, the head injuries are considered serious part due to the brain involvement, where in most of the head injury occurs during the road accidents, person dies or gets the serious deformities. Here in Phana Marma the underlying structures like olfactory nerve, olfactory bulb which helps for sense of smell if injury to these structures leads to gandha agnan (loss of sense of smell). Anosmia is the inability to perceive odor or a lack of functioning olfaction—the loss of the sense of smell. Anosmia may be a temporary issue, but some forms such as from an accident, can be permanent. Anosmia is due to a number of factors, including an inflammation of the nasal mucosa, blockage of nasal passages or a destruction of one temporal lobe. Inflammation is due to chronic mucosa changes in the para nasal sinus lining and the middle and superior turbinates. In Ayurveda also head region is considered the Uthamanaga compare to other body part. We need the detail anatomical structures of Phana Marma to diagnose and treat the diseases especially in surgical aspect. In our routine work specially in driving the vehicles, in sport injuries we can prevent from head injuries.

Keywords: Ayurveda, Marma, Phana Marma, Anosmia, Vaikalyakara Marma

INTRODUCTION

Ayurveda, the ancient science, deals with maintaining the good health and treatment of diseases. The Marma sharir is the part it deals with vital parts of body, the person should prevent these areas from injuries. In Ayurveda it is included because in olden days during war injuries each person should have the knowledge of Marma to prevent vital parts from all type of injuries. Acharya Sushrut and Vagbhat mentioned 107 Marmas in all over body,
during different classifications of *Marma* both Acharya Suhruta and Vagbhata consider *Phana Marma* under *Vaikalyakara Marma and sira marma* (leads to loss of sense of smell) in *shaarirasthan*, located in *shiras pradesh* injury to this area leads to anosmia. During sport injuries especially in boxing, there is a chance to have injury to it, if injury occurs the person may have serious deformities. The *Phana* denotes snake hood, *Phana* part looks that of snake hood. Which is present inside the nasal cavity it opens from the both nostrils, these nostrils are the passage for *Phana marma*, which overcomes from the *Ghranasangnavaha srotas*. Loss of smell can be partial (hypposmia) or complete (anosmia), and may be temporary or permanent, depending on the cause. Although loss of smell is rarely a symptom of a serious condition, even a partial loss of smell could cause you to lose interest in eating, which could possibly lead to weight loss, malnutrition or even depression.

**Phana Marma:**
According to *Sushruta* it is *sira marma* included in *Vaikalyakara marma*. Its *pramana* is *ardhanguli*, these are two in number.

*Ghranamargamubhayataha srotomarga pratibadhe abhyantarataha phane nama, tatra gandraagananam su sha 6/37*
As *Sushruta* told the *Phana marma* is present over inner side of the nasal cavity. According to *Astanga Hridaya*, on either side of the nostrils, adjoining the opening of the ears, inside the throat are the two *Phana marmas*. According to *Astanga Sangraha*, inner to throat, on either side of the *Ghranamarga* and in relation to part of *karna* is *Phana marma*. *Arunadatta teekakara* told that the orifice of the auditory canal is present, by this it is known that the *Phana marma* is inner to *nasa* and above the *srotomarga*, this place is is known as *nasaguha*. Above *nasaguha gandhanadi* (olfactory nerve) branches are present by this only sense of smell occurs.

**UNDERLYING STRUCTURES:**
- Cribriform plate
- Olfactory bulb
- Olfactory nerve

Spheno palatine branch of maxillary artery which is major blood supply to nasal olfactory mucosa in addition to anterior and posterior ethmoidal arteries.

**Figure 1:** Sagital section of Nasal cavity showing olfactory bulb and nerve

**MATERIALS AND METHODOLOGY:**
Literature of *Ayurvedic* and modern science available from *vedic* era to present era. Cadaver, dissection set, study conducted at department of *Rachana Sharir*, G J Patel *Ayurveda* College and Research center New Vallabha Vidya Nagar, Anand, Gujarat.
Figure 2: Basal aspect of the brain to show olfactory bulb

OBSERVATION
Phana marma is located in the very interior of the nasal passes, specially on both sides of the nasal passes and attached with the nose as Bahirsrotas. Srotomarga cannot be considered as a term applied for auditory tube because it connects between the nasopharynx and the middle ear and has no relation with anosmia. Srotomarga also cannot lye internally. Thus srotomarga has been used by Sushruta for cribriform plate (naso cranial communications). Sushruta is of the opinion that the Phana marma is sira type of marma. Though nasal cavity is a prominent seat of hemorrhage yet it cannot be accepted as sira marma because olfactory nerve is the predominant structure in the formation of marma. Loss of smell can be partial (hyposmia) or complete (anosmia), and may be temporary or permanent, depending on the cause. Although loss of smell is rarely a symptom of a serious condition, even a partial loss of smell could cause you to lose interest in eating, which could possibly lead to weight loss, malnutrition or even depression. The underlying structures are Cribriform plate, Olfactory bulb, Olfactory nerve, Spheno palatine branch of maxillary artery which is major blood supply to nasal olfactory mucosa in addition to anterior and posterior ethmoidal arteries. In head injuries or sport injuries there will be involvement of olfactory nerve with this there may be involvement of ethmoidal arteries.

DISCUSSION & CONCLUSION
Phana Marma is considered by both Sushruta and Vagbhata where it is classified under Vai kalyakara marma and sira marma. It is located in the very interior of the nasal passes, specially on both sides of the nasal passes and attached with the nose as Bahirsrotas. Injury at this marma leads to the disability referred as gandha agyan (Anosmia). Anatomically, study of this marma displays the following facts:
1) Though the Phana marma is sira marma, regarding symptomatology sira has nothing to do with Anosmia
2) Anosmia is always because of involvement of olfactory nerve, better to consider Phana marma as snayu marma rather than sira marma.

3) Anatomical structures underlying this marma are credibly cribriform plate, olfactory nerve, and olfactory bulb.

4) Srotomarga is bahirsrotomarga related with the nose dealing with the sensation of smell. In this heading “Nasa hi siraso dwaram” is also a quotable fact. If it is examined, it is found that cribriform plate may be referred for ‘siraso dwara’ as well as ‘srotomarga’. Olfactory nerve take origin from the mucous membrane of nasal cavity and they pass through the small openings in the cribriform plate and end in the olfactory bulb. Any injury inflicted on the anatomy of cribriform plate may damage the olfactory bulb or the olfactory nerve fibres resulting into loss of smell or anosmia (gandha agyan). This anatomy is also very internal anatomy which supplies the features of abhyantara. Olfactory bulb also resembles to the shape of snake hood (Phana). This may be the basis of the nomenclature of marma. Finally, the features of Phana marma as presented by Sushruta can be found relevant to the anatomical structures of described above.

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