

## ANATOMICAL CONSIDERATION OF UTKSHEPA MARMA W.S.R. TO AYURVEDIC & MODERN VIEW POINT

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### ABSTRACT

In Susruta Samhita, it is apparent that the knowledge of anatomy and physiology is essential for the exact study of surgical problems by Ayurvedic surgeons. It is important to know that injuries on certain parts of the human body need more consideration. Such parts are known as *marmasthana*. These are very important vital places. Any injury to these parts may lead to severe pain, disability, loss of function, loss of sensation and death. According to anatomical consideration *marmas* can be divided into *mansa-marma*, *siramarma*, *snayu-marma*, *sandhi-marma*, and *asthi-marma* (respectively, *marma* of muscle, blood vessel, ligament, joint and bone). On the basis of properties, they can be categorized into *saumya*, *vayavya*, *agneya* and *saumyagneya marmas*. *Utkshepa* and *sthapani marmas* are *Vishalyaghna Marma*. They are fatal after removal of foreign body. *Utkshepa Marma* is *snayugat marma*, can be compared to the temporal muscle and fascia up to the meninges. Knowledge of the surface anatomy of *utksepa marma* i.e. Pterion and middle meningeal artery is important for accurate positioning of burr-holes to evacuate extradural haematomas.

**Keywords:** *Marma*, *Utkshepa Marma*, *Vishalyaghna*, Pterion

### INTRODUCTION

Ayurveda, “the science of life” is based on the time tested observation and medical experience. It has immense potential to help in solution of many challenging and unresolved problems of medical world. *Marma* science is an untouched chapter of Indian Surgery. With the exploration of *marma* science the whole scenario of Indian Surgery may change in multidimensional approaches. *Marmas* are not superficial landmarks on the body surface but these are deep-seated important anatomico- physiological structures. The juncture of *mansa* (Muscle), *sira*

(Vessel), *snayu* (Ligaments), *asthi* (Bone) and *sandhi* (Joint) is known as *marma*<sup>1</sup>. According to *Acharya Sushruta* there are 107 *marmas* in the human body<sup>2</sup>. These are very important vital places. Any injury to these parts may lead to severe pain, disability, loss of function, loss of sensation and death. According to anatomical consideration *marmas* can be divided into *mansa-marma*, *sira-marma*, *snayu-marma*, *asthi-marma*, and *sandhi-marma*<sup>3</sup>. On the basis of properties they can be categorized into *saumya*, *vayavya*, *agneya* and

*saumyaagneya marmas*. The *vishalyaghna marmas* are *vayu mahabhuta* predominant<sup>4</sup>. Injury of these causes death but it is after removal of *shalya* from injured part. Total three *vishalyaghna marma* are present in the body. These are two *utkshepa marma* and one *sthapani marma*.

#### **UTKSHEPA MARMA:**

**Position of Utkshepa Marma:** *Utkshepa Marmas* are located above the *Shankha* (temple region), along the lower limit of the hairs (hair-line) of the scalp<sup>5</sup>. They are two in number. It is *Urdhwa jatrugata marma*. On the basis of structure *Utkshepa Marma* is *Snayu marma* in nature<sup>6</sup>. From the basis of injury occurred at this *marma* (vital point) it is *vishalyaghna marma*. *Utkshepa Marma* occupies a space of half *angula* dimension<sup>7</sup>.

**Utkshepa marmaaghat:** The person lives as long as the *shalya* (foreign body) has not been removed. The impacted *shalya* falls off by self, the person survive<sup>8</sup>.

#### **MODERN PERSPECTIVE OF UTKSHEPA MARMA:**

Structures come under this superficial and deep fascia of temporal region i.e. up to the meninges, superficial temporal artery, deep temporal artery and vein zygomatic temporal nerve<sup>9</sup>. The pterion is a small circular area within the temporal fossa which contains the junction of the frontal, sphenoid, parietal and temporal sutures. It usually lies 4 cm above the zygomatic arch and 3.5 cm behind the frontozygomatic suture, and marks the anterior (frontal) branch of the middle meningeal artery and the Sylvian point of the brain. Its position can be estimated roughly by a shallow palpable hollow, approximately 3.5 cm above the center of the zygomatic bone. Clinically, the pterion is relevant because the anterior division of the middle meningeal artery runs beneath it, on the inner side of the skull, which is quite thin at this point<sup>10</sup>.

#### **DISCUSSION**

*Soma, vayu, tejas, satva, rajas, tamas* and *jeevatma* all these factors present in *marma*<sup>11</sup>. The body gets consciousness due to its *satva rajas* and *tamas* properties. The *satva rajas* and *tamas* are also named as *prana* of the body, *prana* lies in *marma*. *Utkshepa marma* are *Vayu pradhan*, hence after trauma the *shalya* which is impacted in the vital parts gives protection to *Prana* until the wound heals normally on its own and the *shalya* is drained out with pus. But if the *shalya* is pulled intentionally before suppuration and auto healing process, there will be sudden exit of *vayu*, and death is the only outcome. A blow to the side of head may fracture the thin bones forming the pterion, rupturing middle meningeal artery producing extradural clot formation. Blood and CSF come out from this point which causes increase in intracranial pressure, cerebral oedema and ultimately death<sup>12</sup>. When any foreign body is impacted in the skin or any part of body, it tears the vessels or enters into them. Such foreign bodies as long as present there will be no bleeding, but if extracted forcibly, vessels are going to open and start to bleed. So, if foreign bodies are allowed to remain there only the tissue granulation chances will be there. This closes the mouth of vessels. Consequently there are less chances of bleeding that may save the life of the individual.

#### **CONCLUSION**

Considering the above details, we should compare the *utkshepa marma* to pterion region. It is *snayugat marma*, can be compared to the temporal muscle and fascia up to the meninges. Though all the elements which comprise a *marma* i.e. *sandhi, mamsa, asthi* and *sira* are all present in the site of this *Marma*, it is predominant in the *snayu* (ligaments and tendons) making up the *utkshepa marma*, therefore it is a *snayu marma*. Knowledge of the surface anatomy of *utkshepa marma* i.e. Pterion and middle meningeal artery is important for accurate positioning of burr-holes to evacuate extradural hematomas.

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