



## REVIEW ARTICLE

### THE CONCEPT OF *THALAM* IN AYURVEDA: AN ANALYTICAL APPROACH

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#### ABSTRACT

Ayurveda, an incredible part of the ancient Indian civilization and culture, till date, mystifies and fascinates its students through its various concepts and therapeutic virtues. *Thalam* is one such treatment modality developed by the *Vriddha Vaidyas* of Kerala by constant observation and rational thinking, where in the medicine is applied on the shallow depression over the head. The selection of the medium and medicament solely depends upon the predominance of the particular *dosha* and may scale from *taila*, *ghrita* to *navaneeta*, *stanya* and such others. Having drawn the substratum for the conceptual development from the classics of Ayurveda, it ascertains its applicability and ability in the treatment of *jwara*, *kamala*, *urdhwaga raktapitta*, *arditha*, *shirah shoola* and several other disorders. This exceptional concept exacts complete comprehension and resolute research.

**Key words:** *thalam*, Ayurveda, head, medicine, bregma

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## INTRODUCTION:

The classics of Ayurveda, while describing the *rachana shareera* (anatomy), describe the human body as '*shadangatvat*' i.e., to be constituted by six parts, viz., four *shakas* (the extremities), one *madhya shareera* (the trunk), one *shiras* (the head, neck & face)<sup>[1]</sup>. The word '*shiras*' is said to be synonymous with: *mastaka, urdhva kaya, urdhvanga, uttamanga*<sup>[2]</sup> *shiro hridaya*<sup>[3]</sup> etc. Acharya Charaka emphasizes the importance of *shiras*, considering it to be *uttamanga* (superior organ) as it is the abode of *prana, pranavaha srotas* and all the *indriyas*<sup>[4]</sup> Acharya Vagbhata, however, enunciates the same with the help of a similie, comparing *shiras* to the *moola* (root) of a plant and *shakas* to the branches of it. The destruction of the former ends up in the annihilation of the latter and vice-versa<sup>[5]</sup>. And also, *shiras*, apart from being the *sthana* of *prana vayu, alochaka pitta* and *tarpaka kapha* is the seat of 37 *marmas*(vital points) (including the *jatroordhva bhaga*) such as *adhipati, vidhura, shankha, aavarta, apanga*...etc., Thus, the diseases as well as the various therapeutic procedures comprehending *shiras* have their own significance in Ayurveda. *Thalam* is an affiliated treatment modality of *shiras* which involves external application of medicine to a specific part on it.

## Definition:

In Malayalam, the word *thalam* literarily means 'a shallow depression', pit, base etc.<sup>[6]</sup>.

The classics of Ayurveda, even though do not make use of the word *thalam*, considering the similarity in the method of administration of *thalam* and that of *shirolepam / shiropichu* it can be implied that the procedure refers to '*the medicine applied over the head*'<sup>[7]</sup>. Considering the meaning of *thalam*, it can be elucidated that the shallow depression explained can be considered to be on par with '*Bregma*', the junction of the sagittal and coronal sutures at the top of the skull, which on mild palpation emerges as a shallow depression.

## The Classical Bedrock:

The substratum for the conceptual development of *thalam* can be depicted in Ayurvedic classics in a variegated manner. For instance;

a) अथ जातस्योल्बं मुखं च सैधव सर्पिषा

विशोध्य घृताक्तं मूर्ध्नि पिचुं दध्यात् ॥

Immediately after birth a gauze dipped in ghee should be placed over bregma region<sup>[8]</sup>.

b) मूर्ध्नि शस्त्रेण शस्त्रवित् कुर्यात्

काकपदाकारं व्रणमेवं सवन्ति ताः सरक्तं

चर्म मांसं वा निक्षिपेच्चास्य मूर्धनि ॥<sup>[9]</sup>

In the context of snake bite, leading to loss of consciousness, at the region of bregma, a wound in the shape of claw of crow (diamond shape) is made and bloody meat piece or skin is kept over it.

c) प्रथमं प्रमार्जितास्यस्य चास्य शिरस्तालु  
कार्पासपिचुना स्नेहगर्भेण  
प्रतिसञ्छादयेत्॥

In a newborn, after the accomplishment of primary care, the region of bregma is covered with a gauze dipped in a lipid <sup>[10]</sup>.

#### **The practical prospects:**

##### **Site of administration:**

Traditionally, *thalam* is performed on the *Bregma*. This particular area is positioned by;

- considering the distance of two hands above the eyebrows, which approximately corresponds to a distance of 8 inches
- locating a place in the centre of the scalp at a distance of extended index finger and thumb from the tip of the nose.

##### **Preparation of the medicine:**

This solely depends upon the medium of *thalam*.

Considering the predominance of the particular *dosha*, the mediums can be conceded as;

- Vata dosha* : *tila taila*, *go ksheera*, *navaneeta* (butter), *eranda taila* (castor oil), *takra*(butter milk), *sthanya*(breast milk)
- Pitta dosha* : *sthanya*, *nalikera ksheera*, *navaneetha*, *tila taila*, *ghrita*, suitable *swarasa*
- Kapha dosha* : *eranda taila*, *takra*, *tila taila*, suitable *swarasa*, *nimba taila*
- Sannipata doshaavastha*: *eranda taila*, *navaneetha*, *tila taila*

The avoidance of *taila* in the conditions of *ama* and *navaneeta* in those of the predominance of *kapha dosha* are worth mentioning here. However, *taila* and *navaneeta* are used as the medium of *thalam*, after subjecting them to specific *samskaras*, (processing ) in order to avoid the adverse effects of fever, headache...etc.,

In case of *taila* – a well heated stainless steel spoon is taken off flame, 3 ml of *taila* and approximately 2 grams of the desired *choorna* are mixed thoroughly in it and utilized when it is lukewarm.

In case of *navaneeta*- *navaneeta* is pasted upon the outer surface of a new, clean earthen pot, in order to dehumidify it, prior to the process of mixing it with the desired medicine, suitable for application.

##### **Preparation of the patient; the procedure of 'thalam':**

*Thalam* is a treatment modality similar to that of *shirolepa*, one of the special types of treatments prevalent in Kerala.

The incipient step involves the removal of hair over the region of application of medicine, in a circular manner, about 3.5 cm in diameter. The patient, after having performed the sacred rites, as in any other Ayurvedic therapeutic procedure, is made to sit on a comfortable couch. Unlike *shirolepa*, the application of medicine is restricted to a circular area of merely four fingers, with a maximum thickness of one finger. The medicine is to be retained at least for a period of one hour, after which the area is wiped thoroughly and rubbed over by a pinch of the *choornam* utilized. The duration of the treatment varies from a few days to few weeks, depending on the condition of the patient and the severity of the disease.

**Clinical applications:**

The area of the application of medicine, in *thalam*, is antagonistic to its area of applicability. i.e., the former is very minimal, while the latter is wider in range. The applicability of *thalam* is evident both as a prime therapeutic measure and as one of the co-therapies in the management of various diseases.

Some illustrations of the clinical utility of *thalam* can be put forth as:

- In traditional practice of *jwara chikitsa*, *rasnaadi choornam with jambeera swarasa* (expressed juice of *Citrus limon Var. acida*)
- In *ardhita chikitsa*<sup>[11]</sup> usage of
  - *navaneeta and eranda taila*
  - *hayangavinam (ghrita extracted from ksheera), chenninayka (dried kumari swarasa / juice of Aloe barbadensis Mill.) and bala moola (root of Sida cordifolia)*
- In *kamala*, use of *navaneeta*<sup>[12]</sup>
- In *urdhwaga raktapitta, durdhura patra swarasa* is ground well with four times *ghrita* until the complete removal of water content and applied over *moordhni*<sup>[13]</sup>
- In *nasamargagata raktapitta, patola patra rasa* (juice of *Luffa acutangula Linn.*) pasted with *navaneeta*; then liquid content is squeezed out and applied over *moordhni*<sup>[14]</sup>.
- In case *Karnagata Raktapittavilva patra swarasa* (juice of *Aegle marmelos*) is used in the same way<sup>[15]</sup>.
- If bleeding happens through the eyes then *Jeevanti rasa* (juice of *Leptadenia reticulate*) with *Ghirtha lepa* over *moordhni*<sup>[16]</sup>
- In *Pittaja Peenasa, manjista (Rubia cordifolia)*, *amalaka (Phyllanthus emblica)*, *usheera (Vetiveria*

*zizanioides*) , *rasna* (*Pluchea lanceolata*), *chandana*(*Santalum album*) powder mixed with *ghrita* prepared with *nirgundi rasa*( juice of *Vitex negundo* ) and castor oil is used as *moordhni lepa*<sup>[17]</sup>.

- In *dushta peenasa*, *taleesa patradi choorna*, *musta*(*Cyperus rotundus*), *ela* (*Elettaria cardamomum*), *vidanga*(*Embelia ribes*) etc. *choorna paka* done with *mastu* etc *dravyas*; can be applied after mixing with suitable *taila*. *Bala patra* with *navaneeta lepa* is another option in this condition<sup>[18]</sup>.

- In *vataja shirobhitapa shirolepa* with *manjista*, *bala*, *rasna* etc. *choorna* with *sthanya* is advocated<sup>[19]</sup>.

- In *shirah shoola – shirasthoda gutika* paste made with suitable *taila* / *ghrita* / *narikela ksheera* can be applied overhead<sup>[20]</sup>

- In *vata rakta thalam* with *yashti choorna* (powder of *Glycyrrhiza glabra* Linn) and *navaneeta* can be done<sup>[21]</sup>.

- Considering various *kriya karmas* (major therapeutic sudation procedures), *thalam* is performed as one of the co-procedures in combination with suitable drugs, in order to prevent any possible complications. *Thalam* is often observed to be carried out during the implementation of procedures like *Kayaseka*, *shashtika*

*shali pinda sweda*, *patra potala sweda* ...etc.

Frequently used traditional drug combinations during these *kriya kramas* include;

- a) *Amalaki* ground well with *takra*, applied and covered with a leaf
- b) utilization of dry powders like *Rasnadi choorna* for application

#### Salient features of *thalam*:

- a) multi-dimensional therapeutic action
- b) accelerated absorption of medicine
- c) cost effectiveness
- d) simplicity in administration
- e) patient companionability

#### Probable mode of action:

The immense literary works and ample of experience of the *Vridha Vaidyas* substantiate the solidity of the generalized action of the medicaments of *thalam* despite its localized applicability. However, profuse usage of *thalam* is seen in the contexts of *Bala Chikitsa* and *Jatroordhwa roga Chikitsa*. *Thalam* can be understood to stage higher efficacy in children as a result of their non-fused or partly fused anterior fontanel.

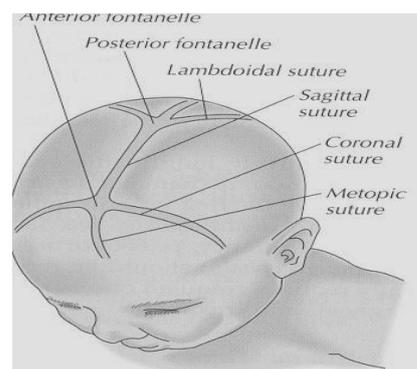


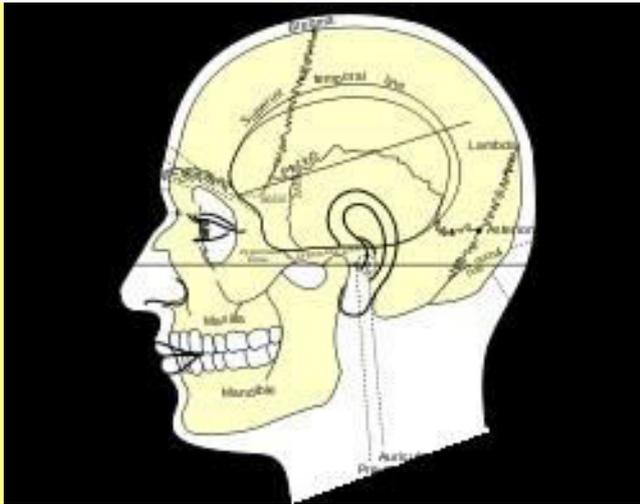
Figure 1: Infant Head Structures

And also, *Sushruta Sutrasthana* encloses the description of the *tridoshas*, where in it has been explained that *Bhraajaka Pitta* absorbs the medicaments administered through the skin, in the form of *abhyanga*, *parisheka*, *avagaaha*, *aalepa* ...etc.<sup>[22]</sup>

The declined or the denuded symptoms of the disease treated under the aegis of *thalam*, prove the achievement of *Dosha saamyata*.(equilibrium of *doshas*) The medicines utilized, as in procedures like *parisheka*, *aalepa*...etc., which do not come in contact with the *Jaataragni*, can be presumed to get absorbed by the action of *Bhraajaka Pitta*. However, the *sparsha grahyagunas* of

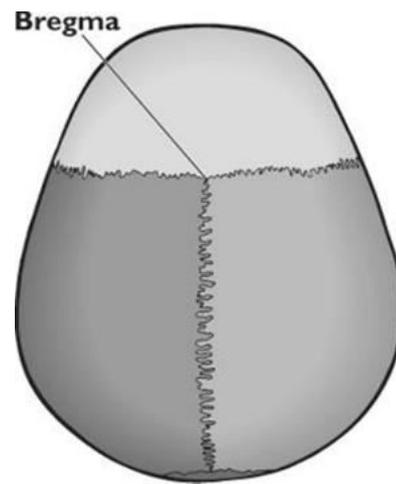
the *dravyas* utilized play a crucial role, as they can act at the level of *Bhraajaka Pitta*.

The 6<sup>th</sup> chapter of *Sushruta Shareera sthana*, *Pratyeka marma nirdesha shareeram*, while describing the various *marmas* of the human body, enumerates the *seemantha marmas* to be five and *adhipathi marma* to be one in number<sup>[23]</sup>. Importance of *Adhipathi marma* is explained as it is the junction of all the *siras*<sup>[24]</sup>. Bregma, the junction of the sagittal and coronal sutures at the top of the skull, can be compared to the confluence of *seemantha marmas* and the seat of *adhipati marma*, a *sira sandhisannipatha*.



**Figure 2: Side view of head, showing surface relations of bones**

The bones of the fetal scalp are soft and meet at "suture lines." Over the forehead, where the bones meet, is a gap, called the "anterior



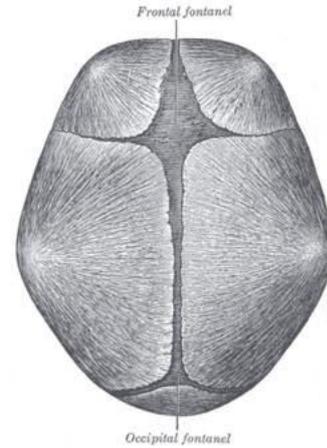
**Figure 3: Bregma**

fontanel," or "soft spot."The *anterior fontanelle* in infants, corresponds to the bregma, when the bones have ossified.



**Fig. 4: Anterior Fontanel: the fetal scalp anterior and posterior fontanel**

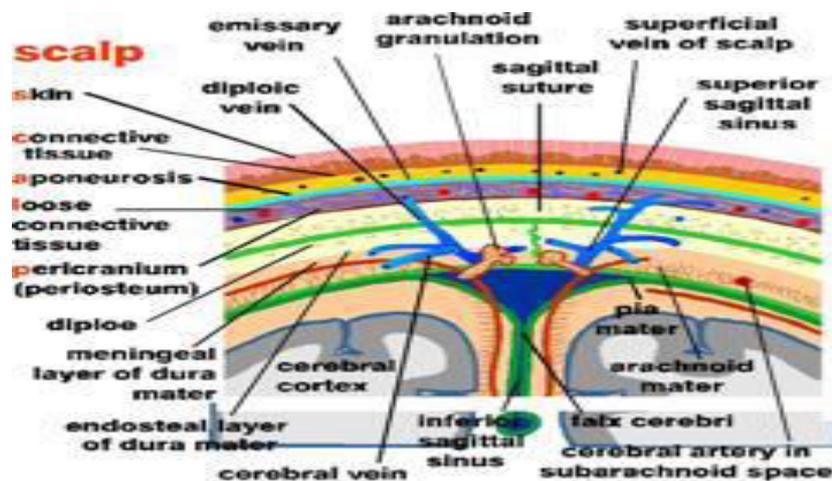
The anterior fontanelle also known as the bregmatic *fontanelle* or *the frontal fontanelle* is the largest fontanelle. It is placed at the junction of the sagittal, coronal and frontal suture. This lozenge-shaped structure measures about 4 cm in its antero-posterior diameter and 2.5 cm in its transverse diameter. The anterior fontanelle is not completely closed until about the middle of



**Fig. 5: The skull at birth, showing the**

the second year. Full ossification starts in the late twenties and finishes before the age of fifty [25]. And also, on considering the layers of the scalp, it is evident that it is made up of five layers, viz.

- a) Skin
- b) Connective tissue
- c) Aponeurosis
- d) loose connective tissue
- e) pericranium



**Figure 6: Scalp and Muscles of Facial Expression**

On considering the loose connective tissue layer, we can make out that this layer consists of a meshwork of collagen, elastic tissue, and

reticular fibers interspersed with numerous connective tissue cells. However, certain emissary veins traverse this layer, which

connect the scalp veins to the *Diploic veins* and *intracranial venous sinuses*. It is also an established fact that the connective tissue (areolar) serves as a reservoir of water and salts for surrounding tissues. Almost all cells obtain their nutrients from and release their wastes into the connective tissue. Thus, all these anatomical and physiological virtues provide an important aid in apprehending and analyzing the probable mode of action of the 'medicine applied over the head', that is *thalam*. The selection of the medium and medicament as per the *doshic* norms, thereby can be discerned to bring about *dosha saamyata* that is the equilibrium of the three body humours, thereby bestowing health.

#### CONCLUSION:

The concept of *thalam* which has been explained, exemplified and established by the *Vridhdha Vaidyas* of Kerala owes the credibility of its conceptual considerations to the classics of Ayurveda and establishes itself as an exceptional therapeutic modality. The area of the application of medicine being antagonistic to its area of applicability, allures and appeals for being a simple and cost effective procedure. And also, the copious clinical considerations of *thalam* in the contexts of children's disorders make it much more appealing and advantageous. The concept of the selection of the medium and medicament depending upon the predominance of the

particular *dosha* involved, is yet again another illustration of the uniqueness and excellence of the science of Ayurveda. The immense literary works and ample of experience of the *Vridhdha Vaidyas* substantiate the solidity of the generalized action of the medicaments of *thalam* despite its localized applicability. The concept of *thalam* there by establishes the 'uttamanga' consideration of *shiras*, through its efficacy. However, lack of any systematic documentation in the field has always opened up new horizons in the field of research. Thus, this exceptional concept exacts complete comprehension and resolute research.

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