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**ABSTRACT**

*Dhamanis* are the channels meant for transportation of nutrient fluid to different parts of the body, for the purpose of nourishment and growth. In Sushruta’s view, they are 24 in number and originate from *nabhi*. of them, the *adhogadhamanis* are principle in carrying the nutrient fluid to different parts of the body. Through this article, an effort is made to clarify the mode of transport and nourishment to different tissues, keeping the three *nyayas* (maxims) in view, viz.,*kedarakulyanyaya*, *upasnehana* and *abhinavajalalavasya* and *anyaya*. This facilitates an easier understanding of the actual process of transport of nutrition, which in turn will make the concept useable in day to day practice, in the effort of correcting the *dhatuvaishamya*.

**KEYWORDS**

*Ahuara rasa*, *Dhamani*,*Dhatuapyayana*, *Kedarikulyanyaya*, *Upasnehana*
INTRODUCTION

Dhamanis are the channels that carry nutrient fluid to the entire body. But, how exactly the nutrient fluid is transported through these structures, for nourishment of tissues, is unclear, as the literature concerned to these aspects is scattered and found in different contexts in the classics. An effort is made towards clarifying the role of adhogadhamani in the process of nourishment, to rest of the parts and provide some clarity into\(^1\). The mechanism by which, the upper parts of the body are nourished by a down coursing dhamani (adhoga)\(^2\). The mechanism through which, the transported nutrition makes its way into the tissues for further steps of nourishment (apyayana of dhatu).

REVIEW OF LITERATURE

Dhamani is defined as,

\[Dhmanaanatanilapooranaatdhamanyaha^1.\]

\[Dhmanaatdhamanyaha^2.\]

Those structures, that perform dhmaanakarma and facilitate the entry or filling of anila, are called as the dhamanis. These dhamanis are 24 in number and are nabhiprabhava (originate in nabhi)\(^3\). They are attached to the nabhi and surround it, like spokes of a wheel\(^4\). Out of the 24 dhamanis, ten are urdhwaga, ten are aadhoga and four tiryakga\(^5\). (susha 9/4, 384).

URDHWAGA DHAMANIS \(^6\)

The ten up coursing dhamanis (urdhwaga) play a part in the functions such as shabda, rasa, gandha, roopa, inspiration, expiration, sighing, yawning, sneezing, laughter, speech and weeping and also maintain the integrity of the body. These dhamanis, after reaching the hrudaya (heart), ramify themselves into three branches, thus making thirty ramifications in all. The ten urdhwaga (up coursing dhamanis), mainly sustain and maintain the areas above the nabhi.

ADHOGA DHAMANIS \(^7\)

The adhoga (down coursing) dhamanis, form the channels, for the downward movement of vayu, pureesha, mootra, shukra and artava. These dhamanis, reaching down to pittashaya, separate the essence produced out of the food, through the action of agni, located nearby and carry it to the remotest parts of the body for nourishment. Thus, they indirectly serve to supply the hrudaya (heart) with its share of rasa. Moreover, they tend to separate the waste portion from the fully transformed rasa. Each of the down coursing dhamanis, is found to ramify further into three branches at a place midway between the amashaya and pakwasaya. Thus they
become thirty in all, which carry out respective functions assigned to them. The adhoga dhamanis mainly sustain and maintain the region below the nabhi.

**TIRYAKGA DHAMANIS**

The four lateral coursing dhamanis, gradually ramify themselves into hundreds and thousands of branches. They spread all over the body in the form of a network. Their exterior orifices are attached to the roots of lomakoopa through which they convey sweda and rasa, thus supplying the body, both internally and externally, with the nutrients.

**DISCUSSION**

The nutrient material formed in pittashaya, needs to reach every part of the body for the purpose of nourishment and the structures that carryout this function are the dhamanis numbering 24. They are, urdhwaga, adhoga and tiryakadhamanis. The upper part of the body is nourished by urdhwaga, lower by adhoga and tiryak parts (horizontal) by tiryakdhamanis.

The dhamanis are said to be nabhiprabhava. Prabhava means the moolasthana (the site of origin). The site of origin of 24 dhamanis is nabhi. Hence, nabhi although predominantly an agnisthāna, is also a pranasthāna. The dhamanis are attached to nabhi like the ara of chakra (spokes of a wheel) and form a closed network that facilitate the conveyance of the nutrient fluid to the nooks and corners of the body.

**DHAMANI – AN ABODE OF AHARA RASA.**

Nabhi is a pittasthāna, where pittashaya is located in its proximity, in which the ahara rasa (nutrient fluid) is formed. Once the ahararasa (nutrient fluid) is formed in pittashaya, it is carried to all parts of the body for the purpose of nourishment by adhogadhamanis, through the medium of urdhwaga and tiryakgadhamanis. The nutrient fluid is conveyed to rasasthāna (rasa dhatu and hrudaya) through the same adhogadhamanis. Therefore, adhoga dhamanis are the ones that impart nutrient fluid to,

1. Urdhwaga and tiryakdhamanis that nourish upper and tiryak parts.
2. Rasa dhatu, for the nourishment of seven dhatus.

With this, one other fact could be established is that, the 24 dhamanis are the site of ahara rasa (nutrient fluid). This strengthens the opinion of Chakrapani that, the location of ahara rasa is dhamani. This paves way for a new method of interpretation of the concept of dhamanipratichaya.
can be seen as the accumulation of *apakwaahara rasa* in the 24 *dhamanis*, which are the structures active at the level of *koshta* and *rasa dhatu*, not essentially *medas* as it is being believed. Because, beyond *rasa dhatu*, the structures active in the transportation are not these 24 *dhamanis*, but are the *srotases*, where metabolism and transportation happen. Treatment planned towards the correction of *ahara rasa* at the level of *koshta-rasadhatu- dhamani*, will prove beneficial in treating the *dhamanipratichaya*.

**PROCESS OF DHATU APYAYANA (NOURISHMENT OF DHATUS)**

The phenomenon by which the nutrient is conveyed from *dhamani* to whole body is similar to *kedarakulyanyaya*\(^\text{12}\). That is, the nutrient fluid reaches every part of the body through the *kulyas* (canals/ *dhamanis*). This only explains the transportation part of the nutrition process. It is, like the river banks that are dampened by the river, the areas of the body are kept nourished, by the nutrient fluid present inside the *dhamanis* and this process is called as *upasnehana*\(^\text{13}\). *Upa* and *snehana* are two words, *upa* is *samipa* (proximity) and *snehana* is nourishment\(^\text{14}\).

Arunadatta, further clarified that, when *ahara rasa* reaches the *rasa dhatu*, a phenomenon similar to *abhinavajalalavakumbhayandanyaya*\(^\text{15}\) happens. That is, just as the water inside a new earthen pot, diffuses to the exterior, so does the *ahara rasa* (the source of nutrition), imparts the required nutrient part to the *dhatus*. This process is called *syandana* (*sravana*). This also provides clarification to the question raised by Dalhana himself, in his commentary on *adhogadhamanis*, as to how these *adhogadhamanis*, which have movement only downwards can possibly carry/give the nutrient fluid to *rasa sthanas* ( *rasa* and *hrudaya*), which are placed in upper body. Dalhana himself has clarified that, the *rasasthana*, does not mean *hrudaya avayava*, but whole area in the proximity of *hrudaya*. The transport of nutrition through *adhoga dhamanis* to *rasa sthana*, is by the process of *syandana* and *upasnehana*. After *rasa dhatu* is formed, the *dhatuparampara* continues.

The *ahara rasa* (nutrient fluid) through *urdhwagadhamanis*, mainly nourish the *koshta* and related components. Nutrient fluid in *tiryakdhamanis*, principally nourish the *rasa* and *sweda*. The *adhogadhamanis*, nourish the *adhakoshta* (lower part of *koshta*) and carry *ahara rasa* towards the *dhatu* for *dhatuparinamana*. To be more precise, *adhogadhamanis* are the structures,
those play an important role in the nourishment of *dhatus* (tissues).

*Pakwashaya* is the location of *adhogadhamani*\(^{16}\).*Basti* karma, believed to be the *ardhachikitsa*, might be very effective because of the fact that, the *adhogadhamanis*, which are the principle transporters of nutrition to *dhatus*, originate in *pakwashaya*, the organ to which medicines are introduced as through *basti*. As the nutrition is served to *rasa dhatu*, the *veerya* (potency) of medicines are made available to the *rasa dhatu* directly by-passing the *jatharagnipaaka*.

**DHAMANI AND DHATU PARINAMANA**

Illustration1 – Showing the role of *adhogadhamani* in *ahara* & *dhatuparinamana*.

1. To *urdhwagadhamnis* for *urdhwa-dehaposhana*.
2. To *tiryakga* for *tiryakgata* structures.
3. To *dhatu* – *rasa dhatu* and *its sthana* for *dhatuparinamana*.

(by *kedarkulya* and *abhinavakumbhajalalavasyandanyaya*)

By *kedarakulyanyaya*, the nutrient material nourishes the whole body, by the process of *upasnehana*, through *urdhwaga*, *adhoga* and *tiryakdhamanis*.

The same process of *syandana* (*abhinavakumbhajalalavasyandanyaya*), *ahara rasa* comes in contact with *rasa*...
adidhatus and dhatuapyayana takes place. Further, the nourishment of dhatu is done by the respective dhatwagni.

**DHAMANI -AS A SYNONYM OF SROTAS**

It has been mentioned earlier, that 24 dhamanis, are active at the level of koshta and are the carriers of ahara rasa. Dhamani is defined as, that which performs dhamana karma. And that which facilitates anilapoorti and that which does sravana is the srotas. Sushruta, though has clarified that, dhamani and srotas are two different entities, in many contexts, the terms dhamani and srotas are used interchangeably. For example – rasa vahinyahadhamnyaha, raktavahinyahadhamanyaha\(^1\). Therefore, the structure is named based on the function it performs. In this context, the term dhamani (a synonym of srotas) refers to structures that, which carry or convey the parinata dhatu (converted dhatu) and is not the place where conversion takes place (as per Charaka’s definition), as the process of conversion of the dhatu and its transport is the function of the whole srotas. Here, the term dhamani, refers to the structures that are meant to carry dhatus. The context in which it is used, could be made use of, to understand its function.

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<th>Table1 Difference between dhamani and srotas</th>
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<tr>
<td><strong>Dhamani</strong></td>
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**CONCLUSION**

Dhamanis are the structures meant for transporting any bodily component, essence or waste. The adhogadhamani is principally involved in transporting the ahara rasa formed in pittashaya to the different parts of the body, by the medium of urdhwa and tiryakdhamanis. It also carries ahara rasa to lower body and rasa sthana, for nourishment of dhatus. Area of action of 24 dhamanis, is at the level of koshta and the materials they carry is ahara rasa. Therefore, dhamanipratichaya should be understood on similar lines.
REFERENCES