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A review on the *Ayurveda* fundamentals of *Dosha-Dhatu-Mala* in reference to *Shalaky Tantra*

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Abstract

The principal entities of the *dosha-dhatu-mala* form the base of the physiology and pathological thinking in *Ayurveda*. The specific branch of *Ayurveda* dealing with the supra – clavicle region known as *Shalaky Tantra* in *Ayurveda* parlance is thus obviously based on the fundamentals of the *dosha-dhatu-mala*. The main abode of the *dosha* is the alimentary canal and thus every disease associated with the *Shalaky Tantra* needs to be thoroughly investigated in this region. The best treatment of the *dosha* is prescribed through the alimentary tract. The planning of the method to be adopted in the cases of the *Shalaky Tantra* is pragmatic based on the general and regional anomalies or malfunctioning of the *dosha-dhatu-mala*. Only local treatment is not sufficient to attain the state of the normalcy of health.

Keywords: *Dosha, Dhatu, Mala, Shalaky, Disease, Treatment*

1. Introduction

The *Ayurveda* system of medicine proposes the concept of *dosha-dhatu-mala* as its independent principle. The base of the body is formed by the *dosha-dhatu-mala*. Thus, the concept of *dosha-dhatu-mala* is one of the Basic Principles of *Ayurveda*. It is the Basic Principles of *Ayurveda* that is the cause of unimpeded continuity of the commonly referred to ‘Ancient Science of life’ or the *Ayurveda* from the basic *trisutra* form to the progressive contemporary science characterised by the introduction and pursuance of the research activity^[1]. The descent of *Ayurveda* and its propagation is therefore an excellent example of the recently introduced concept of the CME, Continuous Medical education. The *dosha-dhatu-mala* is ubiquitous in the body. All the eight specialities of *Ayurveda*^[2], deal with these three basic constituents. The balance of these three is termed as *Sukha* or the health while the imbalance of these is termed as the *Dukha* or the disease^[3].

Among the eight branches of *Ayurveda*, the speciality dealing with the diseases of the Supra-clavicular region (*Shalaky Tantra*)^[4], lacks the vivid description of the *dosha-dhatu-mala* in comparison to the other specialities like the *Kayachikitsa* (medicine) and *Shalya Tantra* (*Ayurveda* Surgery). But as the *Ayurveda* system of medicine cannot progress without the *dosha-dhatu-mala*, it becomes mandatory to understand them through the treasure of knowledge stored in the *Ayurveda* classics especially the *Sootra Sthana*. By the application of the *Adhikarana Siddhanta*^[5], the concepts mentioned in a particular context impact the other contexts indirectly. The *Sootra Sthana* is the most revered section of the classical texts regarded as the *Shirah* of the *Tantra*^[6]. As the *Sirah*/head controls the whole body, the *Sootra Sthana* controls the whole treatise. Therefore, a sincere attempt has been made here to extend the general concepts of the *dosha-dhatu-mala* to the faculty of the *Shalaky*.

2. A Concise Review of the *Dosha-Dhatu-Mala*

The *dosha-dhatu-mala* forms the base of the knowledge of anatomy, physiology, pathology and treatment in *Ayurveda*. The word *dosha* underlines its significance as it is the independent cause of the disease and formation of the natural body constitution^[7]. It is noteworthy that the *dosha* are not perceived directly but are manifested through their actions known through the inference^[8]. The vitiation of the *dosha* is manifested in their substratum known as *dhatu*. The *dhatu*/tissue is thus the abode of *dosha*. The gross body structure and its nourishment is thus the prerogative of *dhatu*. The *mala* represent the entities which are by-products of metabolism and thus deserve to be expelled out. The accumulation of *mala* leads to the diseases.

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Therefore, it becomes clear that the *dosha* are the supreme entities capable to vitiate the gross *dhatu* and the *mala*. The imbalance of the *dosha- dhatu-mala* is termed as disease. The *Ayurveda* treatment aims at the restoration of the *dhatu* ^[9], a unique holistic concept of health.

3. Dosha in context of the Shalakyia Tantra

As *Ayurveda* regards the whole body as a unit composed of the *dosha- dhatu-mala*, the supra-clavicular region dealt under the *Shalakyia tantra* is not an exception. The *dosha- dhatu-mala* in context of the *Shalakyia tantra* assumes all the more significance as the details are not available in the classical texts. The other specialities like that of the *Kayachikitsa* (medicine) and *Shalya* (Surgery) are bountiful with the detailed information of the *dosha- dhatu-mala*. The *Ayurveda* classics are a treasure of knowledge and the *Sootra Sthana* is the possible answer to all the unanswered questions. Thus, the knowledge of the *dosha* described in general is extended to the *Shalakyia tantra* so that the complete understanding of the science is achieved. Of the *tridosha* ^[10], the *Vata* is the initiator and the activator. The importance of *Vata* and its role in relation to the *Shalakyia tantra* is discussed below.

3.1 Vata Dosha & Shalakyia Tantra-

The etymology of the *Vata dosha* per se suggests the importance in *Shalakyia tantra*. The properties of *gati*(movement), *jnana*(perception), *prapti*(attainment) are imbibed in *Vata* suggesting its inevitability in the cognition i.e. taste, smell, hear, touch and visual perceptions which are the functions of the senses and except the all-pervading tactile sensations, all the other four are discussed under the umbrella of the *Shalakyia Tantra*.

The *Vata* is the cause of structure of the sense organs as it is the cause of the formation and differentiation of all the tissues. Therefore all the structural deformities are attributed to the vitiation of the *Vata dosha*. The differentiation of the *srotasa* (channels) is also the function of *Vata dosha* ^[11]. The secretion of the various glands associated with the sense organs is also attributed to the action of the *Vata*. These secretions sometimes as a result of anomaly/pathology become profuse and are then termed as the waste/excretory products termed as *Mala* in *Ayurveda*.

3.2 The Five Types of Vata and Shalakyia Tantra ^[15]

| S.No | Vata variety | Sthana/Location | Functions | Vitiation |
|------|--------------|--|---|--|
| 01 | Prana | Vaktra (Oral Cavity), Murdha(head), Nasika (Nose) | Ingestion, Supports the life, Spitting, Sneezing, Breathing | Hikka, Shwasa |
| 02 | Udana | Urah, Kantha, UrdhwaGati | Speech, Initiation of the senses towards their Subjects, Smriti | Urdhwajatrugata Vikara (Supra-clavicular diseases) |
| 03 | Samana | Pachyamanashaya | Digestion | Gulma, Agnisada, Atisara. |
| 04 | Vyana | Whole of the body | Circulation, Five types of movement | Sarva shareera gat roga |
| 05 | Apana | Pakwashaya | Excretion, Parturition | Basti- Guda Roga |

3.3 The Pitta Dosha and the Shalakyia Tantra-

The *pitta dosha* compared with the cause of transformation, the *Agni* is directly related to the *netra* as the *netra* is formed from the *agni mahabhoota* ^[16] also, wherever there is transformation, there is *Agni*. Thus, the *agni*s all pervading. The functions of the normal *pitta* are *darshanam* – *adarshanam*, *medha-dhee* ^[17], describing the significance of *pitta* in the vision process and the cognition. The site of *pitta* is the *rasa* (first nourishing tissue) & *drik*

Thus, the *Vata dosha* plays an essential role in physiological maintenance of the functions of the sensory organs and thus needs to be taken care of in the *Shalakyia Tantra*.

Acharya Charaka clearly mentions that the completeness/perfection of the elements leads to health/desired while the deficiency/shortcomings of the same elements leads to the undesired disease/pain ^[12]. The vitiation of the *Vata dosha*, therefore culminates into the disease. The characteristic features of the vitiated *Vata dosha* along with its manifestations related to the *Shalakyia Tantra* are tabulated below ^[13].

| Characteristics | Manifestations |
|-------------------------------|---|
| Dryness (<i>Raukshyam</i>) | <i>Sramsas, Bhramsha, Vyasa</i> – Deviation, Prolapse, Expansion <i>Toda, Vyatha, Bheda</i> - Various types of pain <i>Supti, Samkocha, Stambhana</i> - Numbness, Constriction, Stiffness |
| Coldness (<i>Shaityam</i>) | |
| Lightness (<i>Laghavam</i>) | |
| Clarity (<i>Vaishadyam</i>) | |
| Movement (<i>Gati</i>) | |

Apart from these specific characteristics of *Vata*, the *Vata Nanatmaja Vikara* (diseases attributed to only *Vata*) also present a number of diseases/signs & symptoms manifested in the diseases associated with the *Shalakyia Tantra*. These diseases indicate the supremacy of the *Sootra Sthana* of the classics as the understanding of *Shalakyia Tantra* is in fact based on the understanding of the basics. These symptoms or diseases described in the *Vata Nanatmaja Vikara* and associated with the *Shalakyia Tantra* are tabulated below ^[14].

| |
|--|
| <i>Manyastambha</i> (Torticollis) |
| <i>Kanthodhwamsa</i> (Vitiated Throat) |
| <i>Dantashaitihilyam</i> (Laxity of teeth) |
| <i>Hanu, danta, akshibheda</i> (Pain in the Jaw, teeth and eye) |
| <i>Mookatwam, Vakasanga</i> (Difficult speech) |
| <i>Ghrana Nasha</i> (Anosmia) |
| <i>Karna shoola</i> (Ear ache) |
| <i>Badhiryam</i> (Deafness) |
| <i>Timira</i> (Diminished vision/Cataract) |
| <i>Akshi shoola</i> (Painful Eye) |
| <i>Shamkha, Lalat Bheda</i> |
| <i>Shiroruk</i> (Headache) |
| <i>Keshabhoomi Sphutanam</i> (Excessive dryness of the scalp/dandruff) |

(eye) along with the all-pervading *sparshendriya* (skin) again demonstrating its role in the nourishment, visualization and the absorption.

A glance at the five varieties of *pitta* suggests that all of them are directly or indirectly involved in the *Shalakyia Tantra*. The *alochaka* & *bhrajaka* are directly involved while the *Ranjaka, Pachaka* and *Sadhaka* are related indirectly to the *Shalakyia Tantra*. The details are tabulated below ^[18].

3.4 The Five Varieties of *Pitta* and the *Shalaky Tantra*-

| S.No. | <i>Pitta</i> variety | <i>Sthana/Location</i> | Functions | Vitiation |
|-------|----------------------|-------------------------------|---|--|
| 01 | <i>Ranjaka</i> | <i>Yakrit-Pleeha/Amashaya</i> | Pigmentation i.e. <i>rasa</i> to <i>rakta</i> (Scotopsin and photopsin in eye) | Improper formation of <i>Rakta</i> |
| 02 | <i>Pachaka</i> | <i>Pakwamashaya Madhya</i> | Digestion & Maintenance of other varieties | Digestive disorders & a cause of all the diseases. |
| 03 | <i>Sadhaka</i> | <i>Hridaya</i> | Intellect, attainment of the desired contact (senses with their subjects) | Non- cognizance/ Incomplete/Improper Cognizance |
| 04 | <i>Alochaka</i> | <i>Drishti</i> | Vision | Impaired vision |
| 05 | <i>Bhrajaka</i> | <i>Twacha</i> | Transformation/digestion of the oils/fluids/ointments <i>et al.</i> applied on the skin | Impaired |

As pain is essentially related to the *Vata dosha*, the *Raga* (redness/rubor) is associated to the *pitta*. The characteristic features of the *pitta* indicate a number of signs and symptoms presented in the diseases studied under the *Shalaky Tantra* with their various manifestations. These characteristic features of the *pitta* are tabulated below ^[19].

| Characteristics | Manifestations |
|---------------------------------|--|
| Hotness (<i>Aushanyam</i>) | <i>Daha, Aushanya</i> – Burning, Hotness |
| Pungency (<i>Taikshanyam</i>) | <i>Paka, Sweda, Kleda, Kotha, Kandu, Srava, Raga</i> – |
| Fluidity (<i>Dravatvam</i>) | Digestion/transformation, Sudation, |
| Foul odour (<i>Visratvam</i>) | Wetness, Putrefaction, Itching, |
| Movement (<i>Saratvam</i>) | Secretion, Redness |

The features like the burning, putrefaction, itching *et al.* are commonly manifested in the diseases of the supra- clavicle region studied under the umbrella of *Shalaky Tantra* in *Ayurveda*.

3.5 *Pitta Nanatmaja Vikara & Shalaky Tantra*

Amongst the forty diseases attributed to the vitiation of *pitta*, the diseases/symptoms manifested in the patient attending the OPD of *Shalaky Tantra* are *daha, davathu* (burnings),

kotha, visphota (skin eruptions), *raktapitta* (blood loss), *putimukhata* (bad breath), *galapaka* (inflamed throat) and *akshipaka* (inflamed eye) ^[20].

3.6 The *Kapha Dosha* and the *Shalaky Tantra*

The *Kapha* represents the entity responsible for the stability, unctuousness and strength in the body. It is also likened to the *oja* in the normal state ^[21]. The relation of the *Shalaky Tantra* with the *kapha* can be easily understood by a glance at the site of the *kapha* which is the *shira, greeva & hrin-nabhiurdhwa* i.e. the head, neck and above the region of the heart ^[22]. All these are under the purview of the *Shalaky Tantra*. The characteristic features of *kapha* and their manifestations associated with the *Shalaky Tantra* are tabulated below ^[23].

| Characteristics | Manifestations |
|-----------------------------------|--|
| Unctuousness (<i>Snehatvam</i>) | <i>Shaitya, Kandu, Sthairyra,</i> |
| Heaviness (<i>Gauravam</i>) | <i>Gaurava, Sneha, Supti, Kleda,</i> |
| Stability (<i>Sthairyam</i>) | <i>Chirakaritva</i> - Coldness, itching, |
| Sliminess (<i>Paicchilyam</i>) | stability, heaviness, unctuousness, |
| Softness (<i>Matsnaryam</i>) | numbness, moisture/wetness, diminished/prolonged action. |

3.7 The Five Varieties of *Kapha & Shalaky Tantra* ^[24]

| S.No. | <i>Kapha</i> variety | <i>Sthana/Location</i> | Functions |
|-------|----------------------|--------------------------|---|
| 01 | <i>Avalambaka</i> | <i>Urah</i> | Bears the Heart and other sites of <i>Kapha</i> |
| 02 | <i>Kledaka</i> | <i>Amashaya</i> | Moistening of the ingested food |
| 03 | <i>Bodhaka</i> | <i>Jihwamoola/Kantha</i> | Gustation |
| 04 | <i>Shleshaka</i> | <i>Sandhi</i> | Lubrication of the joints |
| 05 | <i>Tarpaka</i> | <i>Shira</i> | Nourishes the Senses |

A close look at the five varieties suggest that the *bodhaka & tarpaka* are directly associated with the supra-clavicle region while the other three are involved indirectly.

3.8 The *Kapha Nanatmaja Vikara* and the *Shalaky Tantra*-

The diseases or the symptoms attributed solely to the *kapha* and associated with the *Shalaky Tantra* are *maladhikyam* (increased secretions), *kanthopalepa* (smeard throat) and *galaganda* (goitre).

3.9 *Rakta Dosha* and *Shalaky Tantra*-

Although the *rakta* is not considered as *dosha* as the *dosha* is that which is the cause of *prakriti* and is an independent cause of disease, the *rakta* has been considered the cause of existence and termed as *jeeva* ^[25]. The *rakta* assumes all the more importance when it comes to the surgery as the cause of *dosha prasara* is the *rakta* ^[26]. A view at the *VidhishonitiyaAdhyaya, Charaka Samhita Sootra Sthana*

chapter 24 reveals the importance of *rakta* in the *Shalaky Tantra*.

The *raktaja/shonitaja vikara* have a number of diseases related to the *Shalaky Tantra*. These include the *Mukhapaka* (Stomatitis), *Akshiraga* (Red eye), *Pootighrana* (Foul odour in the nose), *Asyagandha* (Halitosis), *Upakusha* (Bleeding gums), *Vidradhi* (Abscess), *Atidaurbalya* (Excessive weakness) and *Shiroruk* (Headache)^[27]. These all the symptoms are present in the *Shalaky Tantra* related disorders.

Therefore, the diagnosis and treatment of these symptoms/diseases is very important and unique. In these cases the treatment of the *raktaja/shonitaja vikara* has to be followed. This treatment includes the *raktapitta chikitsa, virechana, upavasa* and *raktamokshana*^[28].

4. The *Dhatu* and the *Shalaky Tantra*

The *dhatu* forms the substratum of the *dosha*. The *dhatu*s are compared with the tissue that forms the basic structure of the

body and maintains the body through the nutrition. The seven *dhatu*s described in *Ayurveda* have their own unique functions summarized by *Vagbhata* [29]. These *dhatu*s play their role as the localised pathology develops in these tissues that need a special treatment. The main function of these seven described by *Vagbhata* is tabulated below-

| Dhatu/Tissue | Main Function |
|---------------|--|
| <i>Rasa</i> | <i>Preerana</i> (Nourishment) |
| <i>Rakta</i> | <i>Jeevana</i> (Life) |
| <i>Mamsa</i> | <i>Lepa</i> (Smear/Cover) |
| <i>Meda</i> | <i>Sneha</i> (Oleation) |
| <i>Asthi</i> | <i>Dharana</i> (Bearing) |
| <i>Majja</i> | <i>Poorana</i> (Filling/Substantiating) |
| <i>Shukra</i> | <i>Garbhotpadana</i> (Reproduction/Generation) |

The *rasa* therefore provides nourishment, the *rakta* life, *mamsa* covers the bony parts, *meda* oleates, *asthi* bears, *majja* fills the bones and the *shukra* is responsible for reproduction/generation. These functions when hampered indicate the vitiation of these tissues described in *Ayurveda* as the *dhatu pradoshaja vikara* which are enlisted below [30].

| Dhatu/Tissue | Pradoshaja Vikara |
|--------------|---|
| <i>Rasa</i> | <i>Tandra, Ayathakala Khalitya-palitya</i> (Also include the Malnourishment related diseases) |
| <i>Rakta</i> | Already discussed above |
| <i>Mamsa</i> | <i>Adhimamsa, Keelam, Galshaluk, Galshundika, Ganda- Gandamala et al.</i> (All included under the <i>Shalakyia Tantra</i>) |
| <i>Meda</i> | <i>Prameha</i> Poorvaropaincluding the excess secretion of the <i>mala</i> |
| <i>Asthi</i> | <i>Adhidanta, Dantaasthibheda- shoola, kesh-loma-nakha- smashru dosha.</i> (All related to the <i>Shalakyia Tantra</i>) |
| <i>Majja</i> | <i>NetraGauravam, Bhrama, Tamo-darshana</i> |

From the above description it becomes clear that these diseases at the level of the tissues/*dhatu*s are related to the *Shalakyia Tantra* and therefore expect the specific treatment along with the *dosha* specific treatment.

5. The Mala and the Shalakyia Tantra

The last of the triad of the *dosha- dhatu-mala, mala* are the by-products of metabolism. The *mala* bear the body in normal state just like the *dhatu* but when they surpass their limits cause the diseases. Amongst the *mala*, the *netra mala* and *sneha* along with the *ksheshu* (excretion/secretion from the gross openings). The *netra mala* is also known as *netradushika* and the *dushikavinashana* is one of the characteristics of the *samyakatarpana* [31].

The tears are sometimes compared with the *Akshi-sneha* (= *Netravita=Dushika*). The tears are classified as-

- ❖ *Vyaptaashru* (physiological tears),
- ❖ *Ashruvega* (psychological) and
- ❖ *Ashrusrava* (pathological lacrimation).

Ashru provides nourishment and lubrication to the eyeball. *Akshi-sneha*, when present in optimum quantity and possessing proper qualities, keeps the eye healthy and is essential for its normalcy. When vitiated by *Dosha* or *Upasarga*, *Akshivita* turns thick and muddy (*Ghana dushika*), which is pathological.

6. Discussion & Conclusion

The *dosha- dhatu-mala* forms the integral part of the *Shalakyia Tantra*. The general treatment of the *dosha* is

necessary along with the disease specific localised treatment. The main site of the *tridosha* is the alimentary tract/*mahasrotasa* and therefore the treatment module in the *Shalakyia Tantra* cannot bypass the source of origin i.e. the *mahasrotasa*. The triad of the *Vamana, Virechana & Basti* is the numero - uno treatment of the *Kapha, Pitta* and *Vata* respectively [32]. So, along with the *Shalakyia Tantra* specific treatment like the *tarpana, putapaka, anjana et al.*, the treatment of the *Kapha, Pitta* and *Vata* should be taken care of.

The importance of the *ama* in the disease cannot be ruled out. In the diseases like the *pratishyaya*, the *ama* is clearly manifested and therefore expects the routine procedure of transformation of the *ama* into *nirama* followed by the local treatment of the site, the nose.

The importance of the knowledge of the *dosha* in *Shalakyia Tantra* needs to be applied in the form of the *auśhadha kala* i.e. time of the medicine intake. Generally in the OPDs of *Shalakyia Tantra*, this important concept is given a miss. This does not augur well for the achievement of the *dhatu samya* i.e. homogeneity of the *dhatu*s. The body according to *Ayurveda*, shows variation in the quality and quantity of its constituents in accordance with the time [31]. This concept is explained in the contemporary sciences as the circadian rhythm. The medicine need to be taken at the time when its target *dosha* manifests itself with vigour. Thus, the seers of yore have meticulously prescribed the appropriate time for the intake of the medicine in tandem with the condition of the *dosha*. The diseases studied under the *Shalakyia Tantra* are generally caused by the vitiation of the *Udana Vayu*, thereby expecting the medicine at the *Udana Kala* i.e. before the evening meals [33]. This demonstrates the importance of the *dosha* in the *Shalakyia Tantra*.

The *dhatu*s are responsible for the formation of the structure and its nourishment. A number of malnutrition related diseases and the hypertrophy (overgrowth) related diseases are directly related to the *dhatu*s. Also, the one *dhatu* is the cause of nourishment and formation of the other [34]. This demands the local treatment specific to the *dhatu*s suggesting their importance in the health care.

The *mala* in normal state bear the body while in excess vitiate the body. Their management expects the normalcy of the *dosha & dhatu*s.

Therefore keeping all these factors under consideration, it is necessary to adopt a dual approach towards the diseases of the *Shalakyia Tantra* i.e. the general treatment of the *dosha & agni* along with the local disease and site specific treatment. By adopting this dual approach, the ultimate goal of the *dhatu samya* can be attained beyond doubt. The *dosha-dhatu-mala* is the cause of disease and health better understood under the *kaaraya-kaarana siddhanta* [35].

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