



Conceptual Review to Find Interrelation between *Dhatusarata*, *Oja* and *Bala*

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ABSTRACT

In Ayurveda dosha, dhatu and mala are an integral part of the human body. Dhatu samya provides support, strength, and structure to the body. Vishuddha roop of a dhatu is known as dhatusarata (constitutional essence). During the treatment the patient should be examined for sara. The essence of all seven dhatu is termed as oja, which nourishes the body and provides the physical and mental strength. In different commentaries and textbooks, three terms named dhatusarata, oja and bala are used in very general sense, so clarity among these terms along with clear difference is necessary to be examined. In this review it is tried to find out the inter-relationship between aforesaid three entities based on brihatrayi classical text and various previously published articles.

Keywords Dhatu, dhatusarata, oja, bala

Introduction

According to Ayurveda dosha, dhatu and mala form the integral base of the human body.^[1] Their normalcy is imperious for maintaining one's health. Dhatus represent structural or constitutional configuration of body that provides support and strength to the body. Excellent state (*vishuddha roop*) of dhatu is known as *dhatu sarata* (constitutional essence).^[2] Acharyas in various classical texts have expounded the features of constitutional essence for the assessment of strength of one's body. It has been noted that certain people with small and slim build are strong, much like tiny ants carrying heavy loads.^[3] Hence the patient should be examined with respect to sara. The substantial essence of all the dhatu is termed as oja. The qualitative oja initiate the contentment, nourishment of the body and increase its strength in term of physical, mental, and immunological aspects. Acharya Charaka has mentioned oja under dashapranayatan which are the seats of life or vitality. The entire body is pervaded by oja and in its absence all the body parts wither off. All three terms dhatu, dhatu-sarata and oja reflect different angles of bala. The present conceptual review carried out from brihatrayi with major commentaries and analyzed using different tantrayuktis, deals with the inter-relationship between aforesaid three entities and magnifying their idiosyncrasies in the perseverance of psychosomatic strength.

Material and Method

To concrete this article, we thoroughly reviewed the brihatrayi. Charaka samhita, along with its commentaries Ayurvedadeepika and Jalpakalpataru, thoroughly explored for the description of dhatu, dhatusarata, oja, and bala. Similarly, Sushruta Samhita along with Nibandh Samgraha commentary and Ashtang Hridaya along with Ayurveda Rasayana commentary were reviewed. Furthermore, the previously published references related to keywords dhatu, dhatusarata, oja and bala were collected using literary research tools PubMed, Dhara and Google Scholar.

Concept of dhatu

The entity which is responsible for supporting the body and nourishing the body is called a dhatu. Cellular differentiation and development of human beings start with the conception (*beej aaropana*) and continue till death. The stem cells can be correlated with dhatu which gives rise to various other cells. In texts of Ayurveda, saptadhatu have been described which are rasa, rakta, mamsa, meda, asthi, majja and shukra. Dosha, dhatu and mala are nourished through the action of dhatvagni on aahar rasa. The nutrients absorbed from aahar rasa are passed into tissues for the nourishment of each dhatu.

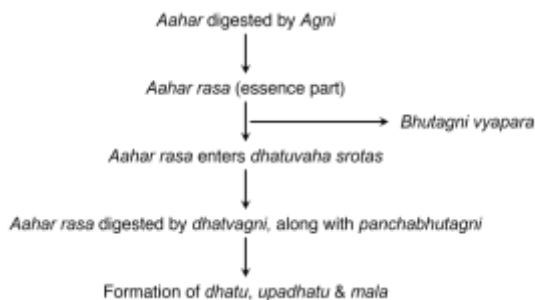


Figure 1: The process of *dhatu* formation.

Concept of *dhatu sarata*

Ashatvidha dhatu sarata is explained in *brihatrayi*. Knowledge of *sarata* is very important for maintaining health or curing a disease. According to *Acharya Charaka*, strength of a person can't be decided by merely looking at the physical appearance, it depends on the *sarata* means the excellent quality of *dhatu*.^[3] *Acharya Charaka* described three types of individuals based on their *sarata* - *sarva sara*, *asara*, and *madhya sara*.^[4]

The concept of *dhatu sarata* and their grading are discussed in a few words in *brihatrayi*. *Sarata* for each separate *dhatu* along with *sarva dhatu sarata* is also mentioned in literature.

Table 1: A comparative analysis of *dhatu sarata* functions, described in *brihatrayi*.

<i>Dhatu sarata</i>	<i>Dhatu sarata</i> functions according to <i>Charaka</i> ^[5]	<i>Dhatu sarata</i> functions according to <i>Sushruta</i> ^[6]
<i>Twaksara (rasasara)</i>	Skin of <i>twaksara purusha</i> - <i>snigdha</i> (unctuous), <i>shlakshna</i> (smooth), <i>mridu</i> (soft), <i>prasanna</i> (clean and adorable) with <i>sukshma alpa gambhira sukumara loma</i> (thin, sparse, deep rooted delicate body hairs) and <i>prabhayukta</i> (lustrous skin). <i>Twaksarata</i> provides happiness, good fortune, grandeur, enjoyment, intellect, knowledge, health, cheerfulness and longevity.	Radiant, soft hairs and skin.
<i>Raktasara</i>	<i>Raktasara purusha</i> have red, unctuous, bright, good-looking - ear, eye, face, tongue, nose, lips, palms of hand, soles of feet, nails, forehead and genitals. <i>Raktasarata</i> provides happiness, excellent intellect, memory, tenderness, moderate strength, intolerance of pain and heat.	the person has unctuous and coppery nails, eyes, palate, tongue, lips, palm and soles
<i>Mamsasara</i>	<i>Mamsasara</i> persons have firm, well developed temporal regions, forehead, nape, eyes, cheek, jaws, neck, shoulder, abdomen, axillae, chest, hands, feet and joints covered with good musculature. <i>Mamsasarata</i> provides tolerance, restraint, lack of greed, wealth, knowledge, happiness, simplicity, health, strength and longevity.	the body is well compact without any depression, the bony joints are covered with well-developed muscles.

<i>Medasara</i>	<i>Medasara purusha</i> have unctuousness specifically in complexion, voice, eyes, hairs, nails, teeth, lips, urine and feces. <i>Medasarata</i> provides wealth, power, happiness, enjoyment, charity, simplicity and sympathy.	unctuous urine and sweat, mellow voice, chubby and exertion intolerance.
<i>Asthisara</i>	<i>Asthisara purusha</i> have prominent heels, ankles, knee joint, elbows, collarbones, chin, head, flanks, nail and teeth. <i>Asthisarata</i> provides enthusiasm, activeness, endurance, longevity and strong and firm body.	one has big head and shoulders, firm teeth, jaw, bone and nails
<i>Majjasara</i>	<i>Majjasara</i> persons have soft body parts, strong, unctuous complexion and sweet voice, prominent, broad and round joints. <i>Majjasarata</i> provides longitivity, strong and endowed with learning ability, wealth, understanding, progeny and respectful image.	the person not lean, has superior strength, melodious and resonant voice, auspicious features and big eyes
<i>Shukrasara</i>	<i>Shukrasara purusha</i> have gentle and charming look with beautiful eyes like filled with milk, immensely exhilarated, unctuous, rounded, firm, even and compact teeth; pleasant and unctuous complexion and voice, brilliant, prominent buttocks. <i>Shukrasara purusha</i> are loved by women for enjoyment, strong, and endowed with happiness, grandeur, health, wealth, honor, and progeny.	person with smooth, compact and white bone, teeth and nails. excessive sex desire and many descendants.
<i>Sattvasara</i>	The <i>sattvasara</i> persons are endowed with memory, devotion, gratefulness, knowledge, purity, enthusiasm, efficiency, and courage. They fight in battle with valor, are free from unhappiness, have proper gait, are highly intellectual, have well-organized activities, devoted to virtuous acts.	Good memory, devotion, wisdom, purity, valor, committed to welfare activities.

Acharya Vagbhata has mentioned the features of *sarvadhatu sarata*.^[7] *Sarvadhatu sarata* persons are *param gauravasanyutah* (to earn great respect), optimistic in all works, tolerant, intelligent and steady.

Assessment parameters of *dhatu* based on *dhatu sarata*

1. *Rasa dhatu*

These points of *rasa sarata* can be considered as assessment parameter of *rasa dhatu* in body level – As skin is supposed to be the reflective index of *rasa dhatu*, so unctuous, smooth, soft, clean, lustrous skin with thin, deep rooted, delicate body hairs indicate the *sarata* of *Rasa dhatu*.

Besides these points of *rasa sarata* can be considered as assessment parameter of *rasa dhatu* in mind level - happiness, enjoyment, cheerfulness. These are other points that can be considered as responsible for influencing the personality in general - grandeur, good fortune, longevity.

2. *Rakta dhatu*

Rakta sarata can be assessed using following parameters. *Rakta sarata purusha* have luscious and coppery lips, palm, sole, tongue, ears, eyes, and ears and they have moderate strength. Mind related parameters like happiness, intellect, memory, intolerance of pain and heat should also be assessed.

3. *Mamsa dhatu*

While assessing the *mamsa dhatu* well compact body, joints covered with good musculature, strength should be considered for *mamsasarata*. Similarly, the mental states like - tolerance, lack of greed, knowledge, happiness, restraint etc, should be considered during assessment. Other factors influencing the personality of *mamsasara purusha* are simplicity, wealth and longevity.

4. Meda dhatu

During the assessment of *medasarata* features physical appearance like unctuousness in complexion voice, eyes, skin, hairs, nails, teeth, lips, urine, sweat and feces should be considered.

While assessing *medasarata* the following parameter related to *meda dhatu* should be assessed in mind level - happiness, enjoyment, exertion intolerance, sympathy.

When assessing *meda dhatu*, other aspects such as wealth, power, charity, and simplicity must be considered.

5. Asthi dhatu

Person with big head and shoulders, prominent heel, ankle, knee joint, elbow, chin, head, nail, teeth, collar bone, strong and firm body have prominent *ashti dhatu*. There enthusiasm, activeness, endurance, longevity should be correlated with *asthisarata*.

6. Majja dhatu

Big eyes, soft body parts, round, broad joints, and a melodious, resonant voice are all indicative of *majja dhatu*. There understanding, strong and endowed with learning ability should be assessed while considering for *majjasarata*. These persons have wealth, progeny and respectful image in society.

7. Shukra dhatu

Person with *shukrasarata* have unctuous and pleasant complexion and voice, prominent buttocks, gentle and charming look, beautiful eyes like filled with milk, white bone, teeth and nails. They are happy, brilliant with excessive sex desire. Other characters like wealth, honour, many descendants, loved by women for enjoyment should also be assessed while considering *shukrasarata*.

Concept of Oja

Oja is excellent essence of *saptadhatu*. *Oja* is an integral entity, which is present in *dhatu* just like *sneha* is present in milk. At the time of conception, it is present in body. Different words have been used to denote *oja* in *Ayurveda* like *rasa*, *jivashonita*, *prakrita sleshma*, *ushma*, *sharir rasa snehan* etc.^[8]

In texts of *Ayurveda*, during the digestion of food two parts are formed *sara bhaga* of *aahar*, known as *aahar rasa* and *kitta bhaga* known as *mala*. By the action of *bhutagni* and *dhatvagni* on *aahar rasa dhatupaka* takes place and the *aahar rasa* is separated in three parts- *prasad bhaga*, *kitta bhaga* and *sara bhaga*.

Table 2: *Prasad bhaga*, *kitta bhaga* and *sara bhaga* of different *dhatu*s

<i>Pachyamana Dhatu</i>	<i>Prasad Bhaga</i>	<i>Kitta Bhaga</i>	
<i>Rasa</i>	<i>Rakta</i>	<i>Kapha</i>	Essence of all <i>dhatu</i> - <i>oja</i>
<i>Rakta</i>	<i>Mans</i>	<i>Pitta</i>	
<i>Mamsa</i>	<i>Meda</i>	<i>Khamala</i>	
<i>Meda</i>	<i>Asthi</i>	<i>Sweda</i>	
<i>Asthi</i>	<i>Majja</i>	<i>Kesh, Roma, Nakha</i>	
<i>Majja</i>	<i>Shukra</i>	<i>Akshi vit, Twak sneha</i>	
<i>Shukra</i>	<i>Garbha</i>	<i>Oja</i>	

Types of oja

After studying various opinions of *acharyas* it seems that there are two types of *oja* located in our body. In this body, the one with less *pramana* (*ashtabindu*) is located in the heart is called *par oja* and the other one with more *pramana* (*ardhanjali*) spread throughout the body is called *apara oja*. Although decay of *apara oja* is not the cause of instant death, but with time it can cause death.

Visramsas, *vyapada* and *kshya* are the progressive stages of dysfunction of *apara oja* leading to death.^[9]

Table 3: Major features of *oja visramsas*, *oja vyapat*, and *oja kshaya*

Sr. No.	<i>Oja visramsas</i>	<i>Oja vyapat</i>	<i>Oja kshaya</i>
1	<i>Sandhi vishlesha</i> (dislocation of joints)	<i>Stabdha-guru</i> <i>gatrata</i> (stiffness and heaviness in body)	<i>Murchcha</i> (Fainting or unconsciousness)
2	<i>Gatra sadanam</i> (Fatigue)	<i>Vata shopha</i> (swelling caused by <i>vata dosha</i>)	<i>Mamsa kshaya</i> (Emaciation and muscle wasting)
3	<i>Dosha chyavanam</i> (displacement of dosha)	<i>Varna bheda</i> (loss of lustre)	<i>Moha</i> (Confusion)
4	<i>Kriya sannirodha</i> (loss of functions)	<i>Glani</i> (Lassitude)	<i>Pralapa</i> (Delirium)
5		<i>Tandra</i> (Drowsiness)	<i>Marana</i> (Death)
6		<i>Nidra</i> (Excess sleepiness)	

Lakshana of diminution of *oja* according to *Charaka* are the fear complex, weakness, worry, disorders of sense organs, deranged luster and mental ability, roughness and emaciation.^[10]

A different view of Acharya Gangadhar on Oja

Acharya Gangadhar considers *bindu* as synonym of *karsh* (~12 mL) hence an *ashtabindu* equals *ardhanjali* (~100 mL). He also compared *oja visramsas*, *oja vyapat*, *oja kshaya lakshana* of *Acharya Sushruta* with *kshaya lakshana*, mentioned by *Acharya Charaka*. Although symptoms are different in both *Charaka Samhita* and *Sushruta Samhita*. *Gangadhar* opines that *oja visramsas* and *vyapat* are having two different categories of symptoms. One is explained by *Charaka* and the other by *Sushruta*.^[11]

View of Hemadri on Oja

According to *Ashtang Hridaya*, *oja* is denoted as *mala* of *shukra*. While in *Ashtang Samgraha*, *oja* is represented as *sara* of *shukra* and due to extreme purity of *oja* there is absence of *malatva* in it. The *shukra* which circulates in males doesn't undergo further transformation but when it enters females, it fuses with *Artava* and become the seat for *jeeva* that is transformed in *garbha*, it's *paka* takes place there. Similar to *rasadi dhatu*, the *paka* of *shukra* also results in *sara* and *kitta bhaga*. This *mala bhaga* forms *oja* and *sara* part forms *garbha* in *stri sharira*. Here, in comparison to *rasadi dhatu*, *oja* is considered as *sara* but in comparison of *garbha*, *oja* is considered as *mala*.

The above explanation doesn't show that *oja* is of two different kinds. *Oja (shukra mala)* which resides in *garbha hridaya*, which is having *pramana* of *ashtabindu*, having *ishat raktapeeta varna* due to its association with *artava* and because of its association with *jeeva*, it is termed as *jeevashonita*. The same *oja*, due to its similarity (*saman guna*), gets nourished by *aahara rasa*, has the *pramana* of *ardhanjali* and it is *sarvadehavyapi*. This only known as *rasatmaka oja*. This *rasatmaka oja* enters the further *dhatu* one after the another, it enhances their functionality it is called *teja* for that particular *dhatu*. The same *oja*, because of continuous process of *paka*, it attains *sara rupa*, it is similar to *agnisamskar* of gold. *Prakrita shleshma* is also known as *oja* because *shleshma* is cause (*hetu*), as similar to the *ayu-ghrita* where *ayu* is termed as *ghrita* but actually *ghrita* is cause of *ayu*. Hence according to the context *oja* is termed as *jeevashonita*, *rasa*, *teja*, *prakrita shleshma*. *Oja* is *mala* of *shukra*. To indicate the importance, *oja malatva* is explained separately.^[12]

Concept of bala in Ayurveda

Bala word is applied to many concepts in *Ayurveda*. *Charaka* described *prakrita shleshma* as *bala*.^[13] *Sushruta* says that the nourishment and stability of *mamsa dhatu* depends on *bala*. A person obtains endeavour, clarity of voice, and good complexion by *bala*.^[14]

Acharya Charaka classified *Bala* into three types, namely- *sahaj*, *kalaja* and *yuktikrita*.^[15] *Sahaj bala* is the constitutional strength that exists in the mind and body from birth. *Chakrapani* says that *oja* is present in the three stages of the embryo *i.e.*, at the time of conception it is present as the essence of sperm and ovum, during the second stage it is present as the essence of slime material which provides the nourishment to the embryo, and during the third stage when the formation of different organs starts, *oja* actions are apparent.^[16]

Discussion

Bala and *Dhatu*sarata

Dhatusarata paves a path for the understanding of the *bala* of the individual. The elephant is huge, compared to the lion, but the attacking power of the elephant is less than a lion. Treatment can be planned accordingly as *aaturbala* has to be assessed before treatment. *Acharyas* have mentioned eight types of *dhatusarata* - seven according to *sapta dhatu* and the eighth one is *sattva sara* which assesses mental endurance.

Bala and Oja

In *Sushruta Samhita* the word *bala* refers to *oja* as *tadev balamityuchyate*.^[8] Here seems to be a mutual cause and effect between *bala* and *oja*. So, the *oja* is the cause (*karan*) here and *bala* is the effect (*karya*) but *Sushruta* has also mentioned that *oja* and *bala* are different things in a single verse “*praninam punarmulamaharo balavarnaujasam cha*”.^[17] *Bala* is also designated as normal *kapha dosha* which provides *bala* to the body. *Acharya Charaka* considered *bala* as *oja*.

Sarvadhatusara verses Oja

<i>Sarvadhatusara</i>	<i>Oja</i>
Persons having all essence of <i>sarvadhātu</i> will be very strong, has excess to all pleasures, enduring, self-assured in all endeavors, inclined toward charitable deeds, have a robust and balanced physique with well-balanced motions, resonant, melodious, and high-pitched voice, endowed with happiness supremacy, wealth, enjoyment and honor, with slow aging and pathogenic process, and most of them have numerous, similar, and long-living offspring.	<p><i>Oja</i> is important in bringing about coordination among all the factors responsible for sustaining life. The elan vital owes its existence to <i>oja</i>.</p> <p>According to <i>Acharya Sushruta</i> functions of <i>oja</i> are firm and well-developed muscles, unobstructed movements, clarity of voice and complexion and normal functioning of external and internal organs.</p> <p>The <i>oja vridhhi</i> state boosts immunity and nourishes all tissue. <i>Oja vridhhi</i> help in <i>swasthya swasthya rakshnam</i>.</p>

Conclusion

In classical texts of *Ayurveda dhatusarata* is described for each *dhatu* individually, while *oja* is the collective effect of *saptadhātu* and is described as essence of all.

Dhatusarata can be considered as an assessment parameter for understanding the status of *dhatu*. It is a strong state of *dhatu* so it will prevent the disease related to concerned *dhatu*. *Sarvadhatusarata* can be considered as assessment parameter to understand the status of *oja*. *Acharya Chakrapani* mentioned two types of *Oja*. While *Gangadhar* accepts only one type of *oja*. After a thorough review, it becomes clear that there is now difference in the view of *Acharya Chakrapani*, *Acharya Gangadhar* and *Acharya Hemadri* on *oja*. *Acharya Hemadri* has presented a conclusive view on *oja*, by considering all the opinions that were prevailing during his time. Thus, it can be said that his opinion on *oja* is more comprehensive, approachable and practical. The essence of *rasa dhatu* can be considered as the main contributing factor in the formation of *oja*. *Dhatusarata* contributes to *dhatubala* related to specific *dhatu*. *Oja* contributes to *dehabala* which is related to all *dhatu*s in general. *Dhatusarata* has characteristic access to the physical psychological and social health of individuals.

Although fundamentally *oja* is *dravya* and *bala* is quality residing in particular *dravya*, based on *karyakarana-abheda* or *guna-guni-abheda*, *oja* and *bala* are considered as if they are the same. *Oja* can be considered as the main contributing factor to built human immunity. *Sukha* is mentioned in majority of *dhatusarata* which can be compared to physical, mental, social and spiritual health for which *oja* or *sarvadhatusarata* has a direct and indirect role.

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