

CONCEPTUAL STUDY OF ASHRAYASHRAYI RELATION OF DOSHA & DHATU
WITH SPECIAL REFERENCE TO VATVRUDHHI IN ASTHIKSHAYAnupama K. Awate^{1*}, Deepa R. Kale² and Hemangini Waghulade³¹Asst. Professor, Kriya Sharir, Dr. D. Y. Patil School of Ayurveda, Nerul, Navi Mumbai.²Professor & HOD, KriyaSharir, Dr. G. D. Pol foundations YMT Ayurved Medical College, Kharghar, Navi Mumbai.³Professor & HOD, KriyaSharir, Dr. D. Y. Patil School of Ayurveda, Nerul, Navi Mumbai.

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ABSTRACT

'Lokpuruhsanyaya' states that any living body is miniature representation of huge universe. All functions in universe are carried out by moon, sun and wind. Similarly, human body bears kapha, pitta and vata performing all function of living body. Since *doshas* are functional representatives of *panchamahabhutas*, they are controller of body functions. *Ashraya-aashrayi* relation is described by *Ashtang Hrudaya* for explaining the relation between *doshas* and *dushyas* in sutrasthan. If *Dosha* gets vitiated they will vitiate the *Dhatu* and *Mala* and cause wide array of diseases. When *Pitta* and *Kapha* increases or decreases, its respective *Dhatu* will also increase or decrease, exception is *Vata* and *Asthi*. *Vata* and *Asthi* are inversely proportional i.e. when *Vata* aggravates the *AsthiDhatu* decreases. Prevention and early intervention can slow the process of osteoporosis in majority population. As we all know prevention is better than cure. Whenever there is *vatavruddhilakshanas*, one can think about future *AsthiKshaya* and can treat likewise, even at early stages. So, to develop the treatment modality the conceptual study is necessary to know the correlation between *ashraya* and *ahsrayi*. *Dosha* and *dushya* are regulated by *bruhana* and *langhana chikitsa*, just by knowing their appropriate relation.

KEYWORDS: Asthidhatu, Vat dosha, Ashraya, Ashrayi, Osteoporosis.

INTRODUCTION

Ayurveda suggests that any cause leads to vitiation of *dosha* in the first stage and then next event start for generation of diseases.

Dosha control other two entities namely *dhatu* and *mala*.

If *Dosha* gets vitiated they will vitiate the *Dhatu* and *Mala* and cause wide array of diseases i.e. when *Pitta* and *Kapha* increases or decreases its respective *Dhatu* will also increase or decrease. This is due to *Ashrayashrayi* relation of *dosha* with corresponding *dhatu* and *mala*. But the exception is *Vata* and *Asthi*. *Vata* and *Asthi* are inversely proportional i.e. when *Vata* aggravates the *AsthiDhatu* decreases.^[1] In the disease process the *Ashrayi* affects the *Ashraya* either *Dravyataha*, *Gunataha* or *Karmataha*.

Any change in any of them will reflect on another in the same fashion except in *Asthi* and *Vata*. '*Asthi Marutayoh Na Evam...*' i.e. *Vata* and *Asthi* are inversely proportional.^[1] Example for *Vata*: *VatajaAaharaVihara* which leads to *VataDoshaVridhhi* which in turn increases the *Vayu Mahabhoota* present in the *Asthi* leading to *AsthiKshaya*.

Asthidhatu can precisely be termed as the construction bars, on the systematic framework of which man stands tall and handsome. Any tumult in the equilibrium of the *dhatu*s leads to abnormalities.

AsthiKshaya is a condition explained in *Ayurveda* in which there is diminution of *asthidhatu* leading to many undesirable effects. As *asthidatu* is a *sthana of vatdosha*, the symptoms mentioned in *asthiKshaya* can be correlated with *vatavruddhilakshanas* as a conceptual study. Even in contemporary science the diseases like osteopenia & osteoporosis related to aging process and deficiencies related to Vitamin D, can be compared with *AsthiKshaya* due to *vatvruddhi*. Osteoporosis has numerous medical implications and a huge economic impact. Osteoporosis is a condition that can be prevented and treated, if diagnosed early and accurately. So it is of utmost importance that we take immediate steps to create awareness and treatment of this disease.

Aims and Objectives

- To study *asthidhatu* as per *Ayurveda* and modern science.
- To study *vatadosha*.
- To study relation between *asthidhatu* and *vatadosha*.

- To study *asthikshayand vatvruddhilakshnas. Or Vatvruddh iin asthikshay*

MATERIALS AND METHODS

Only textual materials are consulted for present study and from which the relevant references have been collected. The principal *ayurvedictexts* referred in this study are *Charaksamhita, Sushrutasamhita, Ashtanghrudaya* and available commentaries on them.

Modern texts and related websites have also been searched.

All compiled matter is reorganized and critically analyzed for the discussion and attempt has been made to draw some fruitful conclusions.

Review of literature

Asthidhatu is fifth dhatu amongst seven.

It gets generated in intrauterine life. *asthidhatwagni* acts on *prithvi, agni* and *vata* predominant portions of nutriment and digests this bringing hardness to it. thus *asthidhatu* get generated^[2]

Charakasamhita mentions *jaghana* as principal organ of *strotas* for *asthidhatu*.^[3] Any problem with *jaghana* or groin or pelvic region leads to disturbance in upright position of living body. Pelvic region contains *pakwashaya*, which gives origin to *vata dosha*.

The term *Asthi Kshaya* is not a single word instead it is composed of two separate terms —*Asthi* and —*Kshaya*. The word *Asthi* which means —To Stay or in the sense of stability. The term *Kshaya* means that which declines or dwindles, it also means that the action or the *kriya* that causes a decline is known as *kshaya*.

Asthikshayalakshanas

1. According to *Charaksamhita Keshaprapatan (Falling of hairs), Lomashmashruprapatan (Falling of hairs of beard), Dwijaprapatan (Falling of teeth), Shrama (Exertion), and Sandhishaitilya (Looseness in joints) Chakrapanicomments on this, as keshaprapatan, lomaprapatan Etc. are seen due to asthikshay*.^[4]
2. According to *Sushrutasamhita, theasthikshayalakshanas are asthishoola (Pain in bones), dant-nakh bhang (Brittleness of teeth and nails), raukshya (dryness). Dalhana says along with the dryness of teeth and nails, entire body will be dry*.^[5]
3. According to *ashtangsangrah, asthikshayalakshanas are, falling of teeth, nails, hairs, body hairs, dryness, parushata (Excess dryness), sandhi shaitilya (Looseness in joints) pain in bones, asthibaddhamamsaabhilasha (desire to eat meat attached to bones)*.^[6]

4. According to *ashtanghrudya thelakshanas of asthikshaya are, asthitoda (Pain in bones), shadan (Falling of teeth, hairs, nails) etc. Commentor said, in kshinasthi, toda (pain) occurs Shadana (falling) of what? They said dantadinam i.e. (falling of teeth, hairs, nails etc.)*.^[7]

Samprapti of asthikshaya: Asthi and Majja also perform the function of mutual nourishment.

Due to obstruction and the indulgence in dietary and lifestyle factors leading to vitiation of *Vata* explained as causes of vitiation of *Asthivahasrotas* directly leads to provocation of *Vata*, resulting in *Asthikshaya*. The other etiological factors responsible for vitiation of *Asthivahasrotas* are specific to trauma causing provocation of *Vata* and leading to *Asthikshaya*. *Dalhana* commenting on the *vishavega* explained by *Sushruta* says that *Purishadhara kala* and *Asthidhara kala* are one and the same.^[8] Hence involvement of the causative factors of vitiation of *Purishavahasrotas* in the pathogenesis of *Asthikshaya* should not be neglected. The causative factors of vitiation of *Purishavahasrotas* are suppression of urge of defecation, excessive eating, overeating during indigestion, weak digestive power and thin body constitution. Suppression of urge of defecation leads to *udavarta* & ultimately to provocation of *Vata*.

Thin body constitution is the main feature of *Vataprakriti*. Hence the provoked *Vata* causes *Asthikshaya*.

According to medical science, lean built and low body mass index (BMI) is the risk factors of osteoporosis.^[9] Excessive eating, overeating during indigestion and weak digestive power leads to formation of *ama*, which provokes *Vata* due to obstruction and obstruction in the channels nourishing the *Asthi* leading to nutritional deficiency to the bone tissue, finally resulting in *Asthikshaya*.

Vat dosha

According to *ashtanghrudya, Ruksha (Dryness), laghu (Light in weight), sheeta (Coldness), khara (Roughness), sukshma (Subtleness) and chal (Movement) are the properties of Anil (Vata)*.^[10]

Vata, in its normal state, protects the body bestowing enthusiasm (Eagerness, desire), expiration and inspiration, all activities (of the body, mind and speech), initiation (and also execution) of the urges (of faeces, urine etc.) maintains of the dhatus in their normalcy and proper functioning of the sense organs.^[11]

Vatavruddhi

According to *Ashtanghrudya, Vata*, when increased (more than its normal) produces *karshya* (emaciation), *Karshnya* (black discoloration), *ushnkamitva* (desire for hot things), *kamp* (tremors), *anaha* (distention of the Abdomen), *shakrutgrah* (constipation), *balbhramsh* (loss

of strength), *nidrabhramsh* (loss of sleep) and *ofindriyabhramsh* (loss of sensory Functions), *pralap* (irrelevant speech), *bhram* (giddiness) and *deenta* (timidity /peevishness).^[12]

According to *Sushrutsamhita*,

If *vata* increases, there is roughness of skin, emaciation, black discoloration, desire for hot things, loss of sleep, loss of strength, & hardness of stool occurs.^[13]

According to *Ashtangasangrah*, *Vata* undergoing *vrudhi* (increase) troubles body by producing emaciation, blackish discoloration, unwanted movements of body tremors, desire for heat, loss of sleep, decrease of strength, loss of consciousness, decrease of capacity of organs, pains in bones, decrease of bone marrow, constipation, flatulence, distention due to gases, delusions, timidity, fear, grief, delirium and such other ailments.^[14]

Ashraya-aashrayi relation

Ashraya means, a resting place or that on which other things depends. *Aashrayi* means, one which depends on the other.

In *ashraya-aashrayisambandha*, the meaning of *Ashraya* is receptacle and that of *Aashrayi* is resorter.^[1]

According to the commentator *Chakrapani*, In simple words we can say the *ashraya-aashrayi bhava* means living of similar entities together. *Doshas* control and command the living body. They are located in various organs in the body. In the living body, the relation of receptacle and resorter is between *doshas* and *dushyas*.

Ashraya-aashrayisambandh is described by *Ashtang Hrudaya* for explaining the relation between *doshas* and *dushyas*.

In the *asthi* (bones) resides *vayu* (*vata*), in the *sweda* (sweat) and *rakta* (blood) resides *pitta* and in the remaining (*dhatu* and *malas* – tissues and wastes) resides *shlesman* (*kapha*), in intimate relation as the *ashraya* (residence, container) and *ashrayi* (resident, content) respectively; the medicines/therapies which cause the increase and decrease of the one, also cause increase & decrease of the other respectively, except in case of *asthi* and *vata*. *dosha* and *dhatu* share a relation with respect to their *vrudhi* and *kshayaavastha*. This relation is understood when *bruhan* or *langhanchikitsa* is applied. *Dhatu bruhanchikitsa* aggravates *doshas*, and *langaha* does alleviation of *doshas*. *Butsantarpanchikitsa* of *asthidhatu* will do *vatakshaya*.^[1]

Vatadosha and *asthidhatu* share an inverse relation among them. In case of *shleshma* and *pitta*, *tarpan* or *bruhana karma* for *dushyas* causes *vrudhi* (aggravation) of that associated *dosha*. Whereas, in case is *vatadosha*,

bruhana karma of *asthidhatu* will cause *kshaya* (alleviation) of *vata*.^[1]

In *Charakasamhita*, *sutrasthana*, *basti of dugdha*, *ghruta* and *tikta dravyas* as the treatment of *asthipradoshajvikaras* is mentioned for *shaman* of vitiated *vatadosha*.^[15] This point out that *Acharya Charaka* had also considered *ashraya-aashrayisambandh* of *vatadosha* and *asthidhatu*. Thus from this discussion it is seen that, *dosha* and *dushyas* are regulated by *bruhana* and *langhanchikitsa*, just by knowing their appropriate relation, i.e. their *ashraya-aashrayisambandha*. *Ashraya-aashrayisambandha* is helpful in pathological investigation and management of disease.

Ashraya-aashrayisambandha of *asthidhatu* and *vatadosha* with respect to calcium- sodium ion channels of the intestine.

Hypercalcemia depresses nervous System and Muscle activity

When the level of calcium in the body fluids rises above normal, the nervous system becomes depressed and reflex activities of the central nervous system are sluggish. Also, increased calcium ion concentration decreases the QT interval of the heart and causes lack of appetite and constipation, probably because of depressed contractility of the muscle walls of the gastrointestinal tract. These depressive effects begin to appear when the blood level of calcium rises above about 12 mg/dl, and they can become marked as the calcium level rises above 15 mg/dl.^[16] Thus, it is seen that what our Acharyas have said is similar. *Ashraya-aashrayisambandha* of *asthidhatu* and *vatadosha* is correct, with respect to modern science.

Hypocalcemia causes nervous system Excitement and Tetany

When the Extracellular fluid concentration of calcium ions falls below the normal. Increased neuronal membrane permeability to sodium ions, allowing easy initiation of action potential due to which, Nervous system becomes progressively more excitable.^[16]

The calcium in blood is confined to the plasma. Normal total serum calcium ranges from about 9 -11mg/dl. The calcium level in blood can be moderately low without causing any symptoms. If levels of calcium are low for long periods, people may develop dry scaly skin, brittle nails, and hair loss. Muscle cramps involving the back and legs are common.^[17]

An extremely low calcium level may cause tingling (often in the lips, tongue, fingers, and feet), hyperactive reflexes, muscle aches, spasms of the muscles in the throat (leading to difficulty breathing), stiffening and spasms of muscles (tetany), convulsions, and abnormal heart rhythms.^[18]

DISCUSSION

Vata and *Asthi*, the *Gunas* are opposite which results in its opposite *Karmas* because as explained earlier *Vata-Asthi* are inversely proportional. In the disease manifestation the *Ashrayi* affects the *Ashraya* i.e. when *Vata* gets vitiated *Asthi* is the most susceptible *Dhatu* and the same applies in other *Ashraya* and *Ashrayi*.

Vruddhi of vayu, decreases & deteriorates the *asthidhatu* and develops *asthidhatukshaya janyavyadhi*. *Asthi* is *vayumabhatupradhan* and also *ashray* of *vata dosha*. *Pakvashaya* is one of the major *sthan* of *vata dosha*, which is considered as *purishdhara kala*. As said by *acharyas purishdhara kalasaaveasthidhara kala, bastichikitsa* shows magical results in *vatrudhhi* and *asthikshaya*. *Bastichikitsa* which is called as *ardhachikitsa*, is carried out at *pakvashaya* and *vata dosha* is brought in *samyakstithi*. *Bastichikitsa* is also found to have very good results on *asthijanyavyadhis*. Thus, *ashraya-ashrayisambandh* of *asthi* and *vata* can be re-established.

An objective criterion in the form of questionnaire can be developed by this literary review. A retrospective study can be undertaken and questionnaire to see whether *vatrudhhi lakshanas* seen in people who have *Asthikshaya* or calcium deficiency.

CONCLUSION

From this study it is re-established that *vatrudhhi lakshanas* are present in *asthidhatukshaya*. *Asthidhatu* & *Vata dosha* have inverse relation as per *ashraya-ashrayisambandh*.

For the treatment of *asthikshaya*, *bruhanchikitsa* is needed to control *vata dosha*.

REFERENCES

1. *Astanga Hrudya* Edited By Pt. Hari Sadashiv Shastri Paradkar Bhishagacharya, Published By Chaukhamba Surbharti Prakashan, Varanasi, Edition, 2010; 11: 26-28.
2. *Charak Samhita* With *Chakra Pani Tika* Edited By Vd. Yadavji Trikamji Acharya, Published By Chaukhamba Surbharti Prakashan, Varanasi, Edition, 2009; 15.
3. *Charak Samhita* With *Chakra Pani Tika* Edited By Vd. Yadavji Trikamji Acharya, Published By Chaukhamba Surbharti Prakashan, Varanasi, Edition, 2009; 5 - 8.
4. *Charak Samhita* With *Chakra Pani Tika* Edited By Vd. Yadavji Trikamji Acharya, Published By Chaukhamba Surbharti Prakashan, Varanasi, Edition, 2009; 17 - 67.
5. *Sushrut Samhita* With *Dallhan* Edited By Vd. Yadavji Trikamji Acharya And Narayan Ram Acharya Kavyatirthai Published By Chaukhamba Surbharti Prakashan, Varanasi, Edition, 2008; 15 - 9.
6. *Astanga Samgraha*- Dr. Ravi Datta Tripathi Published By Chaukhamba Sanskrit Sansthan, Varanasi, Edition, 1992; 19 - 10.
7. *Astanga Hrudya* Edited By Pt. Hari Sadashiv Shastri Paradkar Bhishagacharya, Published By Chaukhamba Surbharti Prakashan, Varanasi, 2010; 11 - 18.
8. *Sushrut Samhita* With *Dallhan* Edited By Vd. Yadavji Trikamji Acharya And Narayan Ram Acharya Kavyatirthai Published By Chaukhamba Surbharti Prakashan, Varanasi, Edition, 2008; 4 - 16.
9. Kofi Asomaning¹, Elizabeth R Bertone-Johnson, Philip C Nasca, Frederick Hooven, Penelope S Pekow. The association between body mass index and osteoporosis in patients referred for a bone mineral density examination. DOI: 10.1089/jwh.2006.15.1028
10. *Astanga Samgraha*- Dr. Ravi Datta Tripathi Published By Chaukhamba Sanskrit Sansthan, Varanasi, 1992; 1 - 11.
11. *Charak Samhita* With *Chakra Pani Tika* Edited By Vd. Yadavji Trikamji Acharya, Published By Chaukhamba Surbharti Prakashan, Varanasi, 2009; 12 - 8.
12. *Astanga Hrudya* Edited By Pt. Hari Sadashiv Shastri Paradkar Bhishagacharya, Published By Chaukhamba Surbharti Prakashan, Varanasi, Edition, 2010; 11 - 16.
13. *Sushrut Samhita* With *Dallhan* Edited By Vd. Yadavji Trikamji Acharya And Narayan Ram Acharya Kavyatirthai Published By Chaukhamba Surbharti Prakashan, Varanasi, 2008; 15 - 15.
14. *Astanga Samgraha*- Dr. Ravi Datta Tripathi Published By Chaukhamba Sanskrit Sansthan, Varanasi, 1992; 19 - 6.
15. Acharya YT. *Charaka Samhita* of Agnivesha, Varanasi, Chaukhamba Prakashan, 2007; 5: 180.
16. Textbook of medical physiology, Philadelphia, by Guyton and Hall published by an arrangement with Elsevier Inc, 11: 979.
17. Essential medical physiology by dr. K. Sembulingum and premasembulingum published by Jaypee brothers New Delhi, 4: 374-375.
18. Principles of Anatomy and Physiology by Gerard J. Tortora & Bryan H. Derrickson published by John Wiley & Sons, (Asia) pte, 1000; 10.