



ISSN 2456-3110

Vol 5 · Issue 4

July-Aug 2020

Journal of **Ayurveda and Integrated Medical Sciences**

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences



Charaka
Publications

Indexed

Concept of *Pandu Roga* in context with *Dhatu* and *Sara*

Poonam Lata Bharti¹, Ruby Rani Agarwal², Ila Tanna³

¹Assistant Professor, Department of Rog Nidan & Vikriti Vigyan, Haridwar Ayurveda Medical College & Research Center, Padartha, Haridwar, ²Professor and H.O.D, PG Dept.of Rog Nidan & Vikriti Vigyan, Rishikul Campus, UAU, Haridwar, ³Associate Professor, Department of Rog Nidan & Vikriti Vigyan, Main Campus, UAU, Dehradun, Uttarakhand, INDIA.

ABSTRACT

The tissue systems of the body, in the Ayurveda view consist of seven kind of basic tissues or *Sapta-Dhatu*s. *Dhatu*s (bodily tissue) are what their nutrition makes them and, on these depend the normal states of functioning of the body. *Saptadhatu*s are produced in a kind of progressive evolutionary metamorphosis, beginning with *Rasa Dhatu* (primary product of digested food) followed by *Rakta* (blood tissue), *Mamsa* (muscle tissue), *Meda* (fat tissue), *Asthi* (bone tissue), *Majja* (bone marrow) and ending with *Sukra Dhatu* (reproductive fluids), the previous *Dhatu* nourishes the next higher, They act as the substratum for each other. The continuously depleting *Dhatu*s are maintained in the state of equilibrium by the food. This implies that the *Dhatu*s are interdependent on each other as the increase or decrease in one shall lead to the increase or decrease in the other. In the case of *Pandu*, the *Rakta-Kshaya* (reduction) is due to the diminution of the *Rasa* by the increased *Pitta* (*Dosha* responsible for maintaining metabolic activities) or the failure of the *Rasa Dhatu* to produce the *Rakta Poshaka* part, i.e. the part of *Rasa* which nourishes the *Rakta Dhatu*. Reduction in *Rasa*, *Rakta* cause diminution of progressive *Dhatu*s, quality (*Sara*) and quantity (*Dhatu Kshaya*) wise, making an individual *Niharsa* (insipid) and *Alpa* (lessened) in *Rakta* and *Medadi Dhatu*s. So, the main objective of the study is to appraise and explore the status of *Dhatu* and *Sara* in *Pandu Roga*.

Key words: *Pandu*, *Dhatu Kshaya*, *Dhatu Sara*, *Rasa Dhatu*, *Rakta Dhatu*.

INTRODUCTION

The *Dosha*, *Dhatu*, *Mala* are the fundamental concepts of Ayurveda and accepted as the prime constituents of the human body. The physiology and pathology of Ayurveda revolves around these three as

Address for correspondence:

Dr. Poonam Lata Bharti

Assistant Professor, Department of Rog Nidan & Vikriti Vigyan, Haridwar Ayurveda Medical College & Research Center, Padartha, Haridwar, Uttarakhand, INDIA.

E-mail: poonambharti271987@gmail.com

Submission Date: 27/07/2020 Accepted Date: 22/08/2020

Access this article online

Quick Response Code



Website: www.jaims.in

Published by Maharshi Charaka Ayurveda Organization, Vijayapur, Karnataka (Regd) under the license CC-by-NC-SA

these are considered as the base of the body. All these are nourished well firstly by the affect of potency of individual *Jatharagni* (digestive energy). Then, the productive nutrients (*Ahara Rasa*) are passed into each level of *Dhatu* (bodily tissues) for nourishment, as like water provided to the root of the tree reach along each and every part of the plant although the origin of branches, secondary branches, leaves, flower and fruit occur in a particular sequence. Similarly the *Rasa Dhatu* reaches every nook and corner of the body but the *Dhatu*s are produced in a particular sequence as the *Rakta*, *Mamsa* etc.

Pandu is categorized under *Rasapradoshaja Vyadhi*, which means vitiation of *Rasa Dhatu* is inevitable. Prevalence of Anemia is very high in developing world; its causes are multi factorial, ranging from micronutrient deficiencies such as iron, folate and

vitamin B₁₂ to infectious diseases such as malaria and worm infections.^[1]

Nutritional deficiency results in Anaemia, impaired immune response, reduced physical endurance, changes in energy metabolism, difficulty in temperature regulation, leading to stress and anxiety, lethargy, headache, fatigue, dyspnoea, palpitations and decreased in cognitive performance.^[2]

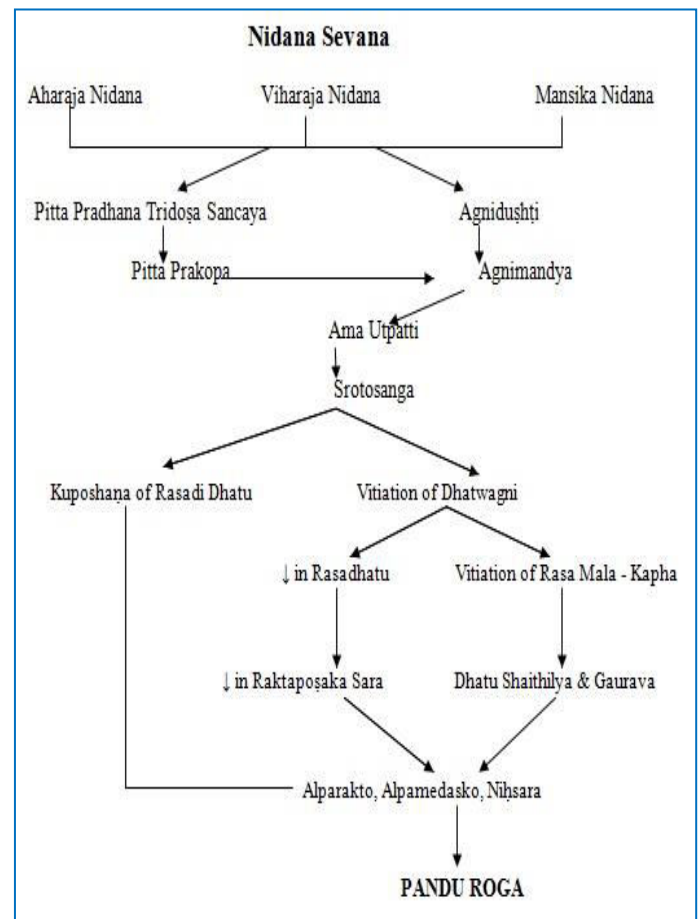
Like *Apatarpanottha* (depletive course) *Pandu*, *Santarpanottha* (over nutritive course) *Panḍu* also lands into the entity like *Dhatu-Kshaya* because Inappropriate *Anna-Rasa* in form of improper quantity and quality like imbalanced diet, leads to the formation of abnormal *Rasa* and will consequently manufacture abnormal and deficient *Rakta* which further cause diminution of other *Poshaya* (stable) and *Poshaka* (nourishing) *Dhatu*s of the body. And ultimately there is diminution of the vital essence i.e. *Ojus*. As a consequence, the individual becomes *Nihisara* (insipid) and *Pandu* is produced.

This approach of *Samprapti* (pathogenesis) may pave a new avenue for the management of *Pandu*, for instance *Rasayana* can be the best answer to treat the disease because *Rasayana* helps in both, qualitative and quantitative enhancement of *Dhatu*s.^[3] *Cakrapani*^[4] in his commentary distinctly revealed that in some cases only *Dosha Viparita Cikitsa* will not bring complete relief to the patient. He has used the term "*Ashrya Prabhava*" to indicate the significance of *Dhatu* in the treatment.

Samprapti (Pathogenesis) of Pandu

Nidana (etiological factors) like *Tikshṇa* (keen), *Ati lavaṇa* (salty), *Katu* (pungent), *Amla* (sour) *Rasa Sevan*, *Vishmashana* (non salutary food), *Diwaswapa* (day sleeping) and *Chinta*, *Shoka* causes *Pitta Pradhana Tridosha Prakopa* (aggravation of *Doshas*) and causes *Agnimandya* (hypo metabolism) which leads to *Ama* (toxic by product generated due to incomplete digestion or metabolism) formation. Further more *Lavana* and *Amla Rasa* are *Apya* in their *Panchabhautika Sangathana* (constitution) which increases *Apyta* (liquidity) and *Kledata* (moisture) and

vitiates *Drava* (liquid) property of *Pitta Dosha* leading to *Agnimandya* as like pouring hot water on fire extinguish fire, this also causes *Agnidushti* and *Ama* formation which causes vitiation of the very first *Dhatu* after *Ahara Rasa*. This results in vitiation of *Rasa Dhatu* eventually leading to vitiation of further *Dhatu*s in serial order. As a result of vitiation of *Rasa Dhatu*, the *Rasa Mala Kapha* causes *Gaurav* (heaviness) and *Shaithilyata* (flabbiness) in *Uttarottara Dhatu*s. This results in *Kshaya* of *Uttarottara* (subsequent) *Dhatu* and *Oja*.^[5] According to *Acharya Chakrapani*, the word *Gaurav* indicates "*Kriyaswasamarthyat*"^[6] means the *Dhatu* are not able to execute their physiological function effectively, i.e. *Dhaarana* (to support) and *Poshana* (to nourish), which hamper the production of *Rakta Dhatu* and subsequent *Dhatu*s. Furthermore, Excessive intake of *Tikta, Katu Rasa* have an opposite Characters than *Rasa Dhatu* will when subjected to the digestion by *Rasagni* will result into the depletion of *Dhatu* qualitatively and quantitatively.



Acharya Chakrapani has cleared the expression *Dosha Dushya Pradushanat* denotes the excessive vitiation of the *Dhatu*s by the *Doshas*. He also emphasized that, the term “*Nihisara*” stands for the loss of Potency of all the varieties of *Sara* of *Dhatu*s,^[7] he also raises the question that *Rakta* and *Pitta* are homogenous as both originated from *Tejas*. Therefore, the aggravation of *Pitta* should result in the increase of *Rakta*. Then how in case of *Pandu*, the aggravation of *Pitta* brings about the reduction of *Rakta*? As a matter of fact, the aggravation of *Pitta* brings about the diminution of the specific portion of *Rasa* (*Rakta Poshak Sara* part)^[8] responsible for the nourishment of *Rakta Dhatu* as a result of which there is no production of the nutrient factor to nourish the *Rakta*, similarly, *Tejas* is considered to be the original source of both *Pitta* as well as *Varna*. So, what is stated above about *Rakta*, applies to *Varna* (complexion) also.

DISCUSSION

The *Rasa* is precursor of all the *Dhatu*s. The immediate *Dhatu* to be nourished by the *Rasa* is the *Rakta*. All the *Nyayas* of *Dhatu Poshana* have accepted the fact that the *Rasa* is the cause of *Rakta*. *Dhatu*s are of two kind viz., *Asthayi* or *Poshaka* and *Sthayi* or *Poshya* corresponding to unstable nutrient substances meant for nourishing the existing stable tissue elements respectively. Acharya Charaka^[9] has observed that the *Dhatu*s or nutrient substances undergo *Paka* or metabolic transformations under the influence of their own (specific) *Ushma* (*Agni* or *Pitta*), the outcome of these *Pakas*, is the production of seven kinds of precursor nutrients, specific to each *Sthayi Dhatu*, the precursor *Dhatu*s thus formed are then transported to the corresponding *Sthayi Dhatu*s, through their own *Srotas*^[10] (structural or functional channels).

Dhatu Nirman Prakriya (mode of formation of bodily tissues)

Dalhana,^[11] commentator of *Sushruta* had given the *Dhatu Poshana Krama* in much elaborated way. When person intakes food of four types like *Ashita* (eaten), *Pita* (drunk), *Lidha* (licked), *Khadita* (devoured) after

the process of *Jatharagni*, *Ahara* gets divided in two parts - (1) *Prasada Bhaga* (nutritive portion) (2) *Kitta Bhaga* (waste portion).

From *Kitta Bhaga* stool, urine, *Kapha*, *Pitta*, *Khamala*, sweat, *Kesha* (hair), *Loma* (body hair) and unctuous substance presents in eyes etc are produced. Seven *Dhatvagni* (metabolic factor located in *Dhatu*) process on *Prasada Bhaga* of *Ahara Rasa* and converts it into *Dhatu*. During *Dhatvagni Paka* two parts are produced (1) *Shuskshma* part (2) *Sthula* part. The *Sukshma* part provides nutrition to the succeeding *Dhatu* and the *Upadhatu* is formed. It is called *Asthayi Dhatu* or *Poshak Dhatu*. *Sthula* part is stable part and provides nourishment to the *Dhatu* concerned and *Dhatumala* is also formed. There is also contribution of *Bhutagni*, *Bhutagni* makes *Ahararasa* suitable for assimilation by the body tissues.

Thus, it can be said that the conversion of one *Dhatu* into other occurs in a systematic manner as *Caraka* clarifies *Dhatavo Hi Dhatvahara*,^[12] this can be justified by a study held on Nevada, A US bone marrow transplant recipient found out that the DNA of his German donor was not limited to his blood, But the donor DNA was also found in other, unexpected parts of Long's body. Four months after the transplant, mouth swabs detected both Long's DNA, and that of his donor. Furthermore, after four years the DNA in his semen had been entirely replaced by his donor's.^[13]

Rakta Nirman Prakriya (mode of formation of blood tissue)

In case of *Rakta* formation the *Rasa Dhatu* is metabolized by *Rasa dhatvagni* and produces its *Sthula* and *Sukashma* part. From *Sthula* part *Rasa Dhatu* gets nutrition itself and *Mala*, *Kapha* is produced. From *Sukshma* part *Rakta Dhatu* and *Updhatu Artava* and *Stanya* are formed. During *Rakta Dhatu* formation when *Raktagni* processes on *Rasa Upadana Bhut Rakta Dhatu* is formed and *Ranjak Pitta* works on it and thus *Rasa Dhatu* is transformed into *Rakta Dhatu*.

Ranjak Pitta and *Raktagni* is key factor for the formation of *Rakta Dhatu*. But *Saman Vayu* also plays

some role in *Rakta Nirman*. According to *Acharya Sharangdhara*, *Ranjak Pitta* is in *Yakrita* (liver) and another reference he says it is in heart.^[14] They are not contradictory references because *Rasa Dhatu* is transformed to *Rakta Dhatu* in seven days circulating in body through heart. Different *Acharayas* has given different *Sthaan* (seat) of *Ranjak Pitta*. *Maharshi Shusrta* has mentioned *Yakrit* and *Pliha* but *Vagabhatta* site of *Ranjak Pitta* is *Aamashaya*. Modern medical science proves that fundic mucosa of stomach secretes many enzymes; these are the factors which bind with food particles and make a new factor which is the cause for blood formation. This factor is called intrinsic factor. Vitamin B12 is absorbed when binds with intrinsic factor. This is similar to *Ayurveda's Ranjak Pitta*. Store house of this compound is *Yakrita*.

Commentary of *Harita*,^[15] depicts that, *Rakta Dhatu* is not formed in reddish color directly but six types of colours are developed before that viz *Shweta*, *Kapota*, *Harita*, *Haridra*, *Padma*, *Kinshuk*, *Alaktak*, *Agni* is responsible for metabolization of *Rasa Dhatu* to *Rakta Dhatu*. If, however these *Agni's* are impaired then the process of transformation is lower. In case of *Pandu* there is incomplete transformation of *Rasa* into *Rakta* leading to incomplete transformation of further *Dhatu*s making the person *Nihara* and *Alpa* in *Rakta* and *Medadi Dhatu*s.

CONCLUSION

Pandu Roga can be effectively compared with Anemia on the ground of its similar signs and symptoms. The term Anemia can be taken under the broad umbrella of *Pandu* but it must be clear in mind that Anemia is not *Pandu* because unlike anemia it is not limited up to blood and blood forming haemopoietic system, but it is originated due to impaired development of proper body components *Rasa*, *Rakta* etc. qualitatively and quantitatively. As we know, Manifestation of any disease depends upon the quality of *Dhatu* present in the body and the quality of *Dhatu* depends upon the nutrition, they drawing from *Ahara Rasa*. As there is a saying if you have a perfect kitchen you don't need a pharmacy. From the above

study we can conclude that *Dhatu-Kshaya* in terms of quality and quantity is unavoidable condition of the disease *Pandu*. Understanding of *Pandu* on the basis of or accordingly to status of *Dhatu* and *Sara* will pave a new opportunity for its proper management.

REFERENCES

1. Lee R, Herbert V (1999) Clinical hematology: Nutritional factors in the production and function of erythrocytes. 10th edition. Williams and Wilkins; 228–266.
2. Osazuwa F, Ehigie F (2010) Prevalence of anemia in preschool and school aged children in Nigeria. J of New York Science 2(20):212–213. [Google Scholar]
3. Pt.Kashinath Shastri, Dr.Gaurakhnath Chaturvedi, Vidhyotini hindi commentary on Charaka Samihta of Agnivesha revised by Charaka & Dridbala, chikitsa sthan, Rasayanadhyaya pratham khand. 1/8, Ed. Chaukhamba, Varanasi, 2007, page no.5
4. Vaidya Harishchandra Singh Kushwaha, hindi commentary on Chakrapanidutt Ayurved dipika, sutra sthan, chapter 24/20. Edited by Chaukhamba Orientalia, Varanasi, 2005.
5. Pt.Kashinath Shastri, Dr.Gaurakhnath Chaturvedi, Vidhyotini hindi commentary on Charaka Samihta of Agnivesha revised by Charaka & Dridbala, chikitsa sthan, chapter 16/4-6, Ed. Chaukhamba Orientalia, Varanasi, reprint 2015, page no. 487
6. Vaidya Harishchandra Singh Kushwaha, hindi commentary on Chakrapanidutt Ayurved dipika, chikitsa sthan, chapter 16/4-6. Edited by Chaukhamba Orientalia, Varanasi, 2005, page-422.
7. Vaidya Harishchandra Singh Kushwaha, Hindi commentary on Chakrapanidutt Ayurved dipika, chikitsa sthan, chapter 16/4-6, Edited by Chaukhamba Orientalia, Varanasi, 2005, page-426.
8. Vaidya Harishchandra Singh Kushwaha, Hindi commentary on Chakrapanidutt Ayurved dipika, viman sthan, chapter 8/102/111, Edited by Chaukhamba Orientalia, Varanasi, 2005, page-278.
9. Pt.Kashinath Shastri, Dr.Gaurakhnath Chaturvedi, Vidhyotini hindi commentary on Charaka Samihta of Agnivesha revised by Charaka & Dridbala, chikitsa sthan, chapter 8/39, Ed. Chaukhamba Orientalia, Varanasi, reprint 2015, page no. 283

10. Pt.Kashinath Shastri, Dr.Gaurakhnath Chaturvedi, Vidhyotini hindi commentary on Charaka Samihta of Agnivesha revised by Charaka & Dridbala, viman stan, chapter 6/3, Ed. Chaukhamba Orientalia, Varanasi, reprint 2015, page no. 709
11. Vaidya jadavji trikram ji acharya, Nibandhsangrahavyakhya, commentary by Dalhana-Sushruta samhita, sutra sthana .14/10 ed. Chaukhamba Orientalia, Varanasi, 2008,
12. Pt.Kashinath Shastri, Dr. Gaurakhnath Chaturvedi, Vidhyotini hindi commentary on Charaka Samihta of Agnivesha revised by Charaka & Dridbala, chikitsa sthan, 15/15, Ed. Chaukhamba Orientalia, Varanasi, reprint 2015, page no. 455
13. https://www.bionews.org.uk/page_146800
14. Shrivastaw Shailaja, Sharangdhar Samhita of Acharya Sharangdhar, Jiwanaprada hindi commentary, purvakhand 6/8, Chaukhamba Orientalia, Varanasi, 1999
15. Harita commentary on Charaka Samihta of Agnivesha revised by Charaka & Dridbala, sutra sthan, chapter 28/4, Ed. Chaukhamba, Varanasi, <https://www.independent.co.uk/news/world/americas/dna-bone-marrow-transplant-man-chimera-chris-long-forensic-science-police-a9238636.html>

How to cite this article: Poonam Lata Bharti, Ruby Rani Agarwal, Ila Tanna. Concept of Pandu Roga in context with Dhatu and Sara. J Ayurveda Integr Med Sci 2020;4:239-243.

Source of Support: Nil, **Conflict of Interest:** None declared.
