

## A REVIEW ARTICLE: PANDU &amp; ITS MANAGEMENT

Dr. Manoj Kumar Saini\*<sup>1</sup> and Dr. Prashant Singh Bhadauria<sup>2</sup><sup>1</sup>Assistant Professor, Dept. of Kaya Chikitsa, Shree Satya Ayurvedic Medical College and Hospital, Moradabad.<sup>2</sup>Assistant Professor, Dept. of Agad Tantra evam Vidhi Vaidyaka, R.B. Ayurvedic Medical College & Hospital, Agra.**\*Corresponding Author: Dr. Manoj Kumar Saini**

Assistant Professor, Dept. of Kaya Chikitsa, Shree Satya Ayurvedic Medical College and Hospital, Moradabad.

Article Received on 21/12/2022

Article Revised on 11/01/2023

Article Accepted on 01/02/2023

**ABSTRACT**

Pandu roga the word itself describe as the disease in which there is presence of altered skin color like yellowish white discoloration of skin. Pandu widely described in various vedas and ayurvedic texts as an independent disease or associated symptoms of other disease. In modern it can be closely related with iron deficiency anemia on the basis of symptoms and causative factors. In a recent estimate, about 8.8% of global population is affected includes all age groups. It is most common form of anemia in India with root cause of nutritional deficiency. Due to high vegetarian diet and less dairy or poultry intake prevalence rate increases per year. Anaemia is a major global public health problem and the most prevalent nutritional deficiency disorder in the world. This article presents the Ayurvedic concept of Pandu Roga (Anaemia).

**KEYWORDS:** Pandu, Vyadhi, Srotas, Anaemia, Pallor.**HISTORICAL REVIEW**

According to Rigveda and Atharvaveda, Panduroga is known as Vilohit, Haribha, Halima. In Garuda Purana it has been described that Takra mixed with loha churna is useful in Panduroga.

- Acharya Charak -Panduroga has been described in Sutrasthana in Ashtodariya Adhyaya as well as in Chikitsasthana 16th Chapter "Panduroga Chikitsa". Charaka has described Panduroga.
- Acharya Sushruta has said Panduroga in Uttartantra Adhyaya 44, "Panduroga Adhyaya" Sushruta has mentioned Kamala, Kumbhavahya, Lagharak as the various stages of Panduroga.
- Acharya Vagbhata has described Panduroga in Nidanasthana 13th adhyaya Panduroga- Shophya Visarpa Nidana and in Chikitsasthana 16th adhyaya, (Panduroga Chikitsa). In Madhava Nidana the description of Panduroga is in 8th Adhyaya Panduroga.
- In Sharangdhara Samhita has described in Pradhana Khanda 7th Adhyaya
- In Bhavprakasha the description of panduroga in Madhyam Khanda 8th Adhyaya.
- In Ashtang hridaya has described panduroga in Nidana Sthana Adhyaya.

**INTRODUCTION**

Panduroga is the disease of Rasavaha Srotas according to Charaka Samhita and Raktavahasroto- viddha Lakshana and Rasadoshaja Vikara as per Maharshi Sushruta. Thus it is related with both important Dhatu Rasa and Rakta

Principal function of both these Dhatu has been described as Preenana (providing nourishment) & Jeevana (life activity) Karma. This is how disease Panduroga can be the choice of disease to assess the Dhatuposhana Krama.

Acharya Charaka described Panduroga after Grahnidosh Chikitsa due to aggravation of Pitta in Grahani, and the aggravation of Pitta constitutes a predominant factor in the causation of Panduroga. Acharya Sushruta has mentioned after Hridaroga due to Same Samkhya Samprapti and treatment of Hridaroga like Tikshna, Amla, Katu etc may cause for development of Panduroga. Acharya Vagbhata mentioned after Udararoga due to Same Doshasanghata. Panduroga has been mentioned as cardinal symptom of the disease which is related with the colour and complexion of the body. Panduroga develops due to vitiation of Bhrajaka Pitta and Rakta which are mainly responsible for the Prakrita Varna of body. Acharya Charaka has mentioned the word "Vaivarnaya" in this regards. Acharya Chakrapani has described it as Shweta, Dhusara, Shwetavabhasa, Peetavabhasa. All of these opinions points towards various kind of discoloration of the body but not specifying any one particular colour like pallor.

**VYUTPATI**

The word "Panduroga" is derived from root "Padi Nasane" with suffix "Ku" and elaboration through "Ni". The meaning is always taken in sense of "Nashana" i.e. the loss. (Shabdakalpadruma - Part 3).<sup>[11]</sup>

-According to Charaka Samhita.: - In this disease the skin of patient is discoloured as Pandu or like haridra or greenish tinge.

-According to Sushruta Samhita in all types of Pandu body of the patient is more Pandu (shweta rakta or shweta pita). So it is named as Pandu.

-According to Amarakosha:- Pandu means a white colour mixed with yellowish Tinge as mentioned in Amarakosha.

-According to Chakrapani, Dalhana:-Acharya Chakrapani, the commentator of Charaka Samhita and Dalhana the commentator of Sushruta Samhita have explain the word "Pandu" as Shweta, Dhusara, Shwetavabhasa, Pitavabhasa

**Nirukti** of Panduroga According to our Acharyas, among the different kinds of colours such as Pandu, Haridra and Harita, Pandu being more common among this so, disease is called as Panduroga itself.

### Nidana

Nidana is most important as the avoidance of etiological factor forms the first and foremost line of treatment. Nidana of Panduroga can be classified into following three categories. 1. Aharaja Nidana 2. Viharaja Nidana 3. Nidanarthakara Roga

**1. Aharaja Nidana** Acharya Charaka has described following etiological factors regarding Ahara.

1. Excessive intake of Kshara, Amla, Lavana, Ati Ushnaana, Virruddha Bhojana, Asatmya Bhojana.
2. Excessive intake of Nishpava, Masha, Pinyaka, Tilataila.
3. Excessive intake of Madya
4. Excessive intake of Kashaya, Katu Rasa

**2. Viharaja Nidana** According to Acharya Charaka: Vidagdhe Anne Diwaswapna, Vyayama, Vyavaya, Vega Vidharana, Affliction of mind with Kama, Chinta, Bhaya, Krodha, Shoka, Pratikarmaritu – Vaishmaya are the Viharaja Nidanas. According to Acharya Harita: Harita Samhita described few new Viharaja Nidana and modified some of the Nidana of ancient texts. All these have been enlisted below.

1. Nidranasha (Loss of sleep)
2. Atinidra (Excessive sleep)
3. Avyayama (Not doing any Exercise)
4. Atishrama (Excessive exercise)
5. Snehavibrama, Snehatiyoga and Amatisara have also been taken as the causes of this disease.

**Manasa Nidana** of Panduroga Chinta, Bhaya, Krodha, Shoka are described in different classical texts.

### Nidanarthakara Roga

In Ayurvedic literature Panduroga has been indicated either as a symptom of many diseases or as Upadrava. So, all these diseases can be considered as Nidanarthakara Rogas of Panduroga. Some of which are Raktarsha, Kaphaja Arsha, Raktarbuda etc. Following

table presents Nidanarthakara Roga for Panduroga according to various classical texts.

Purvarupa: Avipaka, Akshikuta Shotha, Aruchi, Alpavahnita, Angasada, Gatrasada, Hridspandaman, Mutra Pitata, Mridbhakshanaechcha, Panduta, Rukshata, Swedabhava, Shrama, Sthivanadhikya, Twakasphutana. It is to be noted that Acharya Sushruta has mentioned Mrudabhakshanaechcha as Purvarupa of Pandu. Acharya Harita has mentioned Panduta in the Purvarupa of Pandu. Rupa: Pratyatma Ling of this disease is Panduta or Pandubhava, which is invariable feature. Various types of discolouration have mentioned by almost all Acharyas. They have also described Rupa in different types of Panduroga. Pandu doesn't occur only due to lack of Rakta Dhatu but along with it other Dhatus also get vitiated due to aggravated Dosha in certain stage. Samanya Rupa of Panduroga. Acharya Charaka and Vagbhata have mentioned the Samanya Rupa of Pandu. The following table shows different Samanya Rupa of Panduroga. Akshikutashotha, Aruchi, Arohaneayasa, Alpawaka, Annadwasha, Bala-kshaya, Bhrama, Durbalya, Dhatugaurava, Dhatushithilya, Gatramarda, Gaurava, Hatanala, Hatprabhatva, Jwara, Kopana, Karnashweda, Katiurupadaruka, Medalpata, Nidraluta, Nisharata, Ojagunakshaya, Pindikodweshana Panduta, Raktalpatha, Shishiradwasha, Shwasa, Shirnalomata, Sadana, Shrama, Sthivanadhikya, Shithilendriya. These features communicate to that of Mandagni, Rasa Kshaya, Rakta Kshaya and their further consequences i.e. effects of deficient nourishment to other body tissue.

### Classification of Panduroga

Acharya Sushruta has classified Panduroga in 4 varieties:

- Vataja Panduroga
- Pittaja Panduroga
- Kaphaja Panduroga
- Tridoshaja Panduroga

Acharya Charaka has mentioned one additional variety of Panduroga that is Mrida Bhakshanjanya Pandu.

Harita Samhita has mentioned Halimaka and the two varieties of Kosthashakshrita Kamala in the classification of Pandu. This addition brings up the number to eight varieties. However, some Acharyas opine that Halimaka and Koshta Shakshrita Kamala are secondary to Pandu and cannot be included in disease. Similarly they also opine that Mrid-bhakshanjanya Pandu should not be treated as fifth variety but should be included within Vatajadi three varieties since Mrid-bhakshanjanya Panduroga comes into manifestation through the vitiation of Vatajadi Dosha. If viewed logically, the classification given by Acharya Charaka seems to be more rational and acceptable. 1. Vataja Panduroga Due to Vata provoking diet and activity, the Vata gets provoked and Pandu occurs. 2. Pittaja Panduroga After taking Pitta Prakopaka Ahara-Vihara Pitta Dosha gets vitiated and accumulated in the body of

the person of Pitta Prakriti, vitiates the Rasa & Rakta along with Mamsa Dhatu and causes Pittaja Panduroga. 3. Kaphaja Pandu Due to Kapha aggravating Ahara and Vihara, Kapha gets vitiates and causes Kaphaja Pandu. 4. Sannipataja Panduroga In person who indulges in Tridosha vitiating Ahara, Vihara, all the three Doshas get simultaneously aggravated and causes Tridoshaja Pandu, which shows all the symptoms of Vataja, Pittaja and Kaphaja Pandu. 5. Mridbhakshanajanya Panduroga Acharya Charaka, Vagbhata and Madhava have given this type of Pandu where Mridbhakshana stands as causative factor. The soil of Madhura Rasa vitiates the Kapha Dosha, the soil of Lavana Rasa vitiates the Pitta Dosha and the soil of Kashaya Rasa vitiates Vata Dosha.

### Samprapti

In general, Samprapti means development of the disease, which includes the sequences of process or events from Nidana Sevana to the characteristic development of disease. Tridosha Prakopa- Pitta Pradhana Vata throws Pitta in Hrudaya Pitta causes Rasavaha Srotas Dushti Rasa Pradosha and Rasa Vidaha Pitta and Vidagdha Rasa travels throughout Sharira Dushti of Kapha, Tvaka, Rakta, Mamsa Ashraya of Dosha between Tvaka and Mamsa Avarodha to Bhrajaka Pitta Expressions of various Varnas on Twacha Pandu.

### Samprapati Ghataka

Udbhava - Hridaya

Adhithana - Rasa dhatu

Vyakti - Twaka

Sanchara - Rasayani

Dosha - Sadhaka, Pachaka, Ranjaka,

Alochaka Pitta - Vyana vayu, Samana Vayu,

Kledaka Kapha

Dushya - Rasa, Rakta, Mamsa

Srotasa - Rasavaha, Raktavaha

Sadhya - Asadhyata

The signs and symptoms and other conditions indicating incurability of Pandu Roga are as follows –

- (1) When the disease becomes chronic (Chirotpanna)
- (2) When excessive dryness has appeared in the patient. (Kharibhuta)
- (3) When the patient is afflicted with oedema owing to chronicness of this disease. (Kalaprakarshat Shuno)
- (4) When the patient gets yellow vision. (Pitani Pashyati)
- (5) When the patient is fully or partially constipated. (Baddha Alpa Vitaka)
- (6) When the Patient passes loose stool which is green in colour and which mixed with mucus (Sakapha Harita Atisara)
- (7) When the patient feels exceedingly prostrated (Deena)
- (8) When the body is exceedingly white as if besmeared (with whiteness) (Shwetatidigdhangha)
- (9) When the patient is exceedingly afflicted with vomiting, fainting and morbid thirst. (Chhardi - Murchha - Trushardita)

- (10) When the body of the patient becomes pale on account of loss of blood (Asrika Kshayad shwetatvam)

### Upadrava (Complications)

This is known as complication of the disease.

The complication arises out of the original signs and symptoms either in a grievous manner or as a violent form. If the disease is not treated then the following complications may arise.

Aruchi (Anorexia), Pipasa (Thirst), Chhardi (Vomiting), Jwara (Fever) Agnisada (Dyspepsia) Murdha-Ruja (Headache), Kanthagata Shotha (Oedema in throat), Abalatva (Weakness), Murchha (Fainting) Klama (Fatigue) Hridaya Pidana (Cardiac Pain) Shwasa (Breathlessness) Atisara (Diarrhoea) Kasa (Cough), Swarabheda (Obstruction of Speech).

### Treatment of Panduroga

In Ayurveda, three general principles of treatment have been mentioned in Charaka Samhita. They are Daivavyapashraya, Yuktivyapashraya and Satvawajya. Here only Yuktivyapashraya Chikitsa has been mentioned which is as follows.

1. Nidana Parivarjana (Avoidance of aetiological factors)
2. Snehana (Oleation therapy) and Swedana (Fomentation therapy)
3. Shodhana (Eliminating the factors responsible for producing the disease).
4. Shamana (Palliative treatment) to correct the deficiency or abnormality and also treat the allied symptoms.

In Pandu Roga both Shodhana and Shamana Chikitsa can be performed. Keeping the above view in mind various methods have been prescribed, some of which act as Snehana, some as Shodhana and some act specifically on Panduroga along with Snehana and Shodhana Gunas importance. Snehana- In case of Pandu, there is diminution of Rakta, Meda, Oja etc. and the body becomes dehydrated, emaciated and deficient in lipid substances; which provoke Vata causing further deterioration the condition. For Snehana Karma, various preparations have been mentioned in Ayurvedic text. For example, Rajnighrita, Triphala Ghrita, Tilavaka Ghrita, Dadima Ghrita, Danti Ghrita, Draksha Ghrita, Panchgavya Ghrita, Mahatikta Ghrita, Panchatikta Ghrita etc. They can be used in various types of Pandu according to the predominance of Doshas, variation in pathogenesis and in symptoms. Swedana: After Snehana, Swedana Karma is done depending upon the patient's condition so as to bring the Doshas into Koshta. Shodhana: Vamana and Virechana Karma both can be performed in Panduroga after proper oleation. Commenting on the performance of Vamana, Acharya Dalhana has said that while performing Vamana in case of Panduroga one should always keep in mind about physical condition of the patients, the climate, time and

place. Acharya Charaka has mentioned Madanaphala as most suitable drug for emesis in case of Pandu. Similarly, for Virechana a long list of drugs has been mentioned in Ayurvedic texts but Acharya Sushruta has given more stress on Haritaki in all types of Pandu. Shamana Chikitsa (Palliative treatment)

1. Treatment according to predominance of Doshas.
2. Specific treatment.
3. Treatment according to the predominance of Lakshanas (symptomatic treatment).
4. Pathya-Apathya

### I. Treatment according to predominance of Doshas

In cases of Vatika Pandu the substances having Snigdha Guna, in Paittika the substances having Madhura and Tikta Rasa and in Kaphaja Pandu drugs having Ushna Virya and in Tridoshja Pandu, a mixture of all the above should be prescribed. In Mridbhakshanajanya Pandu, the Mritika which may be composed of various indigestible and inaccessible substances obstructs various canals. Thus, it is necessary to remove it by Tikshna Virechana.

### II. Specific treatment: Vishishta Aushadhi (Specific Drugs) -

As already described that Pandu is predominantly due to lack of blood. The fact that Lauha is closely related with formation of blood was well realized and that is why Rakta has also been known by the word Lohita, and Pandu by the word Vilohita. Use of Lauha preparation in the treatment of Pandu is mentioned by almost all the Ayurveda Samhita. In this connection, a verse from Acharya Vagbhata is important -Pandvamaye Shreshtha. Various forms of drugs which have been used in the treatment of Pandu in Ayurvedic texts: In the treatment of Pandu, single drug or a combination of two or more drugs have been used. A description is given as:

1. Single drugs which have been used in Pandu are - Lauha Bhasma, Mandura Bhasma, Pure Kaseesa, Shilajita, Vardhamana Pippali etc.
2. Compound drugs which are of vegetable origin e.g. Triphala, Phalatrikadi Kwatha, Punarnavashtaka Kwatha, Vidangavaleha etc.
3. Drug which are a combination of vegetable origin and animal origin e.g. Mahatiktaka Ghrita, Pathya Ghrita, Rajani Ghrita, Gomutraharitaki etc.
4. Drugs which are a combination of vegetable and mineral origin e.g. Yogaraja, Shilajatvadi Vati, Navayasa Lauha, Mandura Vataka, Punrnavadi Mundura.
5. Asava and Arishta e.g. Lauhasava, Punarnavasava etc. In brief the Panduhara Yogas are described in various forms such as Churna, Vati, Asava, Arishta, Avaleha, Ghrita.

### III. Pathya- Apathya

This includes diet and environmental factors which should be regulated according to the need of the body. (A) Pathya - (Measures which are beneficial to the patients of Pandu) Acharya Sushruta has mentioned the use of drink containing juice of Amalaki, Ikshurasa, salt

and honey. Similarly, vegetables and fruits which are beneficial in Pandu have also been mentioned in Bhaishajya Ratnavali. They are Patola, Guduchi, Leaves of Chaulai and Punarnava. Pakva Amalaka, Kharjura, Rasona, Palandu etc. are beneficial in Panduroga. (B) Apathya - (Measures that aggravate the disease) All those measures should be avoided which aggravate the disease. The various measures which are responsible for the development of Panduroga have been described previously.

### DISCUSSION

Causative factors of Pandu are widely described in Samhitas. According to Acharya Sushruta Rakta gets vitiated by Diwasvapa, Viruddha Bhojana and Krodha. He has also mentioned that Krodha, Shoka, Bhaya, Vidagdha Anna Sevana, Ati Maithuna and Tila Tail and Pinyaka leads to vitiation of Pitta Dosha. Ativyayama, Ratrijarana, Nidranasha, Ativyavaya and Ati Adhvagamana leads to Vata Prakopa. Acharya Charaka has mentioned Pandu Roga caused by suppression of Chhardi, Vegavarodha, Viruddha Anna Sevana and of excessive use of Ati Amla and Lavana Rasa.

All these causes improper digestion of food which leads to improper Rasa Dhatu formation and further hamper Rakta Dhatu, Mamsa Dhatu formation and so on and thus leads to Pandu Roga. involving vitiation of Agni and Ama production, which in next step obstructs the Dhatuvaha Srotas which leads to disturbance in Dhatuposhan Krama and ultimately produces Pandu. Thus, the pathology of Panduroga is mainly concerned with vitiation of Pitta which in turn vitiates the Rakta, leading to condition of Pandubhava.

Acharya Sushruta has classified Panduroga in 4 varieties but Acharya Charaka has mentioned one additional variety of Panduroga that is Mrida Bhakshanjanya Pandu. Acharya Sushruta has mentioned that Pandu Bhava is caused by vitiation of Twaka through the vitiated Rakta in one who indulgence in Ahita Ahara Vihara. Acharya Vagbhata has mentioned the Samprapati given by Acharya Charaka. Thus the pathology of Panduroga is mainly concerned with vitiation of Pitta which in turn vitiates the Rakta, leading to condition of Pandubhava. So, Pitta being main factor in the causation of Panduroga, all the fivefold functions of it are affected more or less, but as the main seat of the disorganization is the Rakta and complexion of body, the Ranjana and Bhrajan function of Pitta is to bear the brunt. Thus Pitta Dosha takes leading part in the production of Dhatushaithilya and Dhatugaurava. This leads to Balakshaya, Varnakshaya and Ojakshaya. Ultimately, the Panduroga is stated to be afflicted with Raktalpata, Medalpata, Nihsarata, Vivarnata and Shithilendriyata.

Clinical presentation of Pandu can be correlated with anaemia of modern medical science. Anaemia is without blood/ pallor of the body. As the disease is closely

related with decrease of Rakta, many Lauha preparations also are described in the management of Pandu. All these treatment modalities correct metabolism and stimulates Dhatuposhana.

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