



# SYSTEMIC PERSPECTIVES ON *PANDU ROGA*: AN *AYURVEDIC* LITERATURE REVIEW WITH MODERN ANAEMIA LINK

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## Abstract

**Background:** *Pandu Roga* has been widely described in classical Ayurvedic literature and ancient Hindu texts including the *Ramayana*, *Mahabharata*, *Agnipurana* and *Garuda Purana*. Classical *Acharya* such as *Charaka*, *Sushruta* and *Vagbhata* provide detailed insights regarding its aetiology, symptomatology and pathogenesis, reflecting strong parallels with modern concepts of anaemia. **Aims and Objectives:** This review aims to integrate Ayurvedic and modern perspectives on *Pandu Roga*. The objectives are to discuss its Ayurvedic aetiology, *Samprapti*, clinical features and classical management and to correlate these descriptions with contemporary understanding of anaemia. **Materials and Methods:** Data were collected from classical Ayurvedic texts, authoritative commentaries and modern medical literature. Research articles from PubMed, Google Scholar and AYUSH repositories were reviewed. Relevant information was analysed and thematically organized to present a comprehensive overview. **Results:** Ayurvedic literature identifies multiple *Nidana* such as dietary, lifestyle, psychological and disease-related factors contributing to *Pandu Roga*. The condition involves vitiation of *Pitta-dominant Tridosha*, impairment of *Agni*, disturbances in *Rasa-Rakta Dhatu* and obstruction of *Bhrajaka Pitta*, leading to various discolorations of the skin and systemic weakness. Classical descriptions of symptoms—including pallor, fatigue, breathlessness and digestive disturbances—closely correlate with nutritional and haemolytic anaemia. Chronic cases with *Dhatu Kshaya* are considered *Asadhya*. *Ayurveda* also emphasises individualized classification such as *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja* and *Mridbhakshanajanya Pandu*. **Conclusion:** *Pandu Roga* is a multifactorial systemic disorder broadly aligning with modern anaemia in its causes, manifestations and prognosis. Classical formulations like *Lauha Kalpa* highlight ancient therapeutic understanding of iron deficiency. Integrating Ayurvedic principles with biomedical knowledge enhances diagnosis, prevention and holistic management, ultimately improving patient outcomes.

**Keywords:** Anaemia, *Ayurveda*, *Rasa Dhatu*, *Rakta Dhatu*

## Introduction:

Pandu has been mentioned in several ancient Hindu texts such as the *Ramayana*, *Mahabharata*, *Agnipurana* and *Garuda Purana*.<sup>1</sup> In the *Mahabharata*, *Pandu* is introduced as the father of the five *Pandava*, while the *Garuda Purana* recommends the use of *Takra* mixed with *Lauha Churna* for treating this condition. These

references indicate that *Pandu Roga* was well recognized in those times and that physicians were capable of identifying and managing it. The use of iron-based formulations for *Pandu* treatment thus appears to have been established since antiquity. According to *Charaka Samhita*, *Pandu* is a disorder of the *Rasavaha Srotas*, whereas *Sushruta* attributes it to *Raktavaha Srotas* involvement and considers it a *Rasa Doshaja Vikara*. *Charaka* describes *Pandu* after *Grahani* disorders, highlighting aggravated *Pitta* in *Grahani* as a major causative factor. *Sushruta* positions *Pandu* after *Hridroga*, noting a similar *Samprapti* and explains that consuming *Tikshna*, *Amla* and *Katu* substances may contribute to its development. *Acharya Vagbhata* discusses *Pandu* after *Udara roga*, attributing it to a similar *dosha sanghata*. He identifies *Pandutva*—changes in body colour and complexion—as the main symptom. The condition arises from the vitiation of *Bhrajaka Pitta* and *Rakta*, which normally maintain natural body complexion. Overall, the classical views suggest that *Pandu* involves various forms of discoloration rather than a single specific shade like pallor.

### Aims and Objectives:

This review aims to integrate Ayurvedic and modern perspectives on *Pandu Roga*. The objectives are to outline its Ayurvedic aetiology, pathogenesis and symptoms and correlate these concepts with modern understanding of anaemia.

### Materials and Methods

This review is based on information collected from classical Ayurvedic texts, standard commentaries, modern medical literature and research articles sourced from databases such as PubMed, Google Scholar and AYUSH portals. Relevant data were compiled and analysed to provide a unified overview of *Pandu Roga*.

### Vyutapatti:

The term *Pandu* originates from the root *Padi-Nashne Dhatu*, with the addition of the suffix *Ku* and further modification by *Ni*. Throughout these derivations, the core meaning remains associated with *Nashana*, indicating depletion, loss or deterioration.<sup>2</sup>

### Nirukti:

The word *Pandu* denotes a faint, yellowish-white or lifeless complexion. Therefore, any illness in which this distinct pallor (*Pandu Varna*) is the main characteristic is identified as *Pandu Roga*. The condition is named after its most prominent sign marked loss of normal skin colour.

### Nidana:

The term *Pandu* is derived from the root *Padi Gatou*, which refers to *Gati* or transformation. This root highlights the process involved in the formation of *Rasa*, *Rakta* and subsequent *Dhatu*. When this *Dhatu*-formation mechanism becomes disturbed, *Pandu Roga* develops. In the context of treatment, identifying and avoiding causative factors (*Nidana Parivarjana*) is essential, as it plays a key therapeutic role. The causative factors of *Pandu Roga* are broadly classified into *Aharaja* (dietary), *Viharaja* (lifestyle), *Mansika* (psychological), *Apacharaja* (improper conduct) and *Nidanarthakara* (diseases acting as causes).

<i>Aharaja Nidana</i> <sup>3</sup>	<i>Viharaja Nidana</i> <sup>4</sup>	<i>Mansika Nidana</i> <sup>5</sup>	<i>Nidanarthakara Nidana</i> <sup>6</sup>
1. Overconsumption of foods that are alkaline ( <i>Kshara</i> ), sour ( <i>Amla</i> ), salty ( <i>lavana</i> ), hot ( <i>ushna</i> ) or highly penetrating ( <i>Teekshna</i> ).  2. Eating incompatible ( <i>viruddha</i> ) or unsuitable	1. Engaging in activities such as daytime sleeping, exercise, or sexual intercourse before the previously eaten food has been	Mental disturbances caused by emotions such as desire ( <i>kama</i> ), fear ( <i>bhaya</i> ), anxiety ( <i>chinta</i> ), anger ( <i>Krodha</i> ) and grief ( <i>Shoka</i> ).	Conditions such as <i>Raktaarsha</i> , <i>Raktarbuda</i> , <i>Raktapradara</i> , <i>Rajyakshama</i> and recurrent fevers ( <i>Punaravartaka Jwara</i> ) can directly or indirectly disturb the <i>Dosha</i> , eventually leading to the manifestation of <i>Pandu Roga</i> .

(Asatmya) food combinations.	fully digested ( <i>vidagdha-anna</i> ).		
3.Frequent intake of items like <i>Nishpava</i> , <i>Masha</i> , <i>Pinyaka</i> and sesame oil ( <i>Tila taila</i> ).	2. Improper or incorrect administration of <i>Panchakarma</i> procedures ( <i>pratikarma vaishamya</i> ).		
4.Excessive use of alcoholic beverages ( <i>Madya</i> ).	3.Failure to follow appropriate seasonal regimens ( <i>Ritu vaishamya</i> ).		
5.Habit of consuming soil or clay( <i>Mridabhakshana</i> ).	4.Suppressing natural bodily urges ( <i>Vega vidharana</i> ).		
6.Taking large amounts of astringent( <i>Kashaya</i> ) and pungent( <i>Katu</i> ) tasting foods.			

**Puravaroopa:**

<b>Puravaroopa</b>	<b>Acharya Charaka<sup>7</sup></b>	<b>Acharya Sushruta<sup>8</sup></b>
	1. <i>Hridya spandana</i> (Palpitation) 2. <i>Raukshyam</i> (Dryness) 3. <i>Sweda abhava</i> (Absence of Sweating) 4. <i>Shrama</i> (Fatigue)	1. <i>Twak-sphutana</i> (skin cracking or dryness) 2. <i>Gatra-sada</i> 3. <i>Akshikuta-sotha</i> (periorbital edema) 4. <i>Mrid-bhakshanachchha</i> (craving or inclination to eat clay/earth) 5. <i>Pita-Mutra</i> (yellowish or altered urine) 6. <i>Avipaka</i> (impaired digestion)

**Rupa<sup>9</sup>:**

*Acharya Charaka* describes several *Samanya rupa* (general symptoms) of *Pandu Roga*. The patient experiences *Karnanada* (tinnitus), *Agnimandya* (reduced digestive power), *Daurbalya* (weakness), *Klama* (prostration and fatigue), *Anannabhilaṣa* (aversion to food), *Bhrama* (giddiness), *Sarikangavedana* (body ache), *Jwara* (fever), *Shwasha* (breathlessness), *Gurutva* (heaviness) and *Aruchi* (anorexia). The patient feels as though the limbs are being pressed, squeezed, or churned (*Pistavat vedana*). *Akshikuta sotha* (periorbital swelling) is also observed. The complexion gradually turns *Harita-varna* (greenish), *Romaharsa* or falling of body hair occurs and the patient loses natural *Varṇa* (lustre), becomes *Krodhana* (irritable), avoids *sita sevana* (cold things), feels *Tandra* (sleepiness), has excessive *pitta*, becomes *Mukha-udyama virati* (unwilling to speak) and suffers from *pashchat-pada-sankocha* (calf cramps). On exertion especially climbing, the patient experiences *kaṭi*, *uru* and *pada shula* (pain in lumbar region, thighs and feet) along with marked weakness (*daurbalya*).



### Types of *Pandu Roga*:

Type	Charaka	Sushruta	Vagbhata
1. <i>Vataja</i>	+	+	+
2. <i>Pittaja</i>	+	+	+
3. <i>Kaphaja</i>	+	+	+
4. <i>Sannipataja</i>	+	+	+
5. <i>Mridbhakshanajanya</i>	+	-	+

#### 1. *Vataja Pandu*<sup>10</sup>

Symptoms include, Abnormal Reddish or dark discoloration (*Aruṇa* or *Krishna Paṇḍuta*) seen over the skin, eyes, nails, urine and stool. The patient may also experience dryness (*Rukshata*), body ache (*Angamarda*), tremors (*Kampa*), pricking or piercing pain (*Toda*), headache (*Shirashula*), hard or dry stools (*Grathita Mala* / *Shushka Mala*), altered taste in the mouth (*Asyavairasya*), general debility (*Balakṣaya*), abdominal distension (*Anaha*), swelling (*Sotha*) and dizziness or vertigo (*Bhrama*).

#### 2. *Pittaja Pandu*<sup>11</sup>

Due to the intake of *Pitta*-provoking *Ahara* and *Vihara*, *Pitta Dosha* becomes vitiated and accumulates in the body, eventually leading to *Pittaja Pandu*. The condition is marked by *Pita-Harita Varna* of the *Twacha* (yellowish-green discoloration), along with *Jwara*, *Daha* (intense burning sensation), *Trishna* (excessive thirst) and *Murcha* (episodes of fainting). Patients experience *Pipasa*, *Pitامutra-Shakruta* (yellow discoloration of urine and stool), *Ati-Sweda* (excessive sweating) and *Sheetakanta*, a craving for cold substances. There may also be *Katuka-Kashayata* (pungent or astringent taste in the mouth) and aversion or discomfort toward *Ushna* and *Amla Ahara*. Symptoms like *Vidaaha-Vidagdha Anna* (burning sensation due to improper digestion of food), *Daurgandhya* (offensive body odour), *Daurbalya* (general debility) and *Bhinnavarcha* (loose stools/diarrhoea) are commonly seen.

#### 3. *Kaphaja Pandu*<sup>12</sup>

Consumption of *Kapha*-aggravating *Ahara* and *Vihara* leads to the vitiation and accumulation of *Kapha Dosha* in the body resulting in *Kaphaja Pandu*. The condition presents with *Gaurava* (a sense of heaviness), *Tandra* (drowsiness) and *Chhardi* (vomiting). The patient develops a *Shveta-abhasata* (pale or whitish complexion) along with *Praseka* (excessive salivation) and *Lomaharsha* (goosebumps). Symptoms such as *Murchha* (fainting), *Bhrama* (vertigo), *Klama* (mental fatigue) and *Sada* (general laxity of body parts) are common. Respiratory features like *Kasa* (cough) and *Shwasa* (breathlessness) appear, accompanied by *Alasya* (lethargy) and *Aruchi* (loss of appetite). There may be *Vak-svara-graha* (impairment of speech and voice) and *Shukla Mutra-Akshi-Varchasa* (whitish discoloration of urine, eyes and stool). Patients often crave *Katu*, *Ruksha* and *Ushna* substances (pungent, dry and hot foods). *Shotha/Shwayathu* (oedema) and *Madhurasyata* (sweet taste in the mouth) are also observed.

#### 4. *Sannipataja Pandu*<sup>13</sup>

*Sannipataja Pandu* occurs when an individual consumes *Ahara* and *Vihara* that aggravate all three *Dosha*, resulting in the simultaneous vitiation of *Vata*, *Pitta* and *Kapha*. In this condition, the patient exhibits a combination of symptoms characteristic of *Vataja*, *Pittaja* and *Kaphaja Pandu*.

#### 5. *Mridbhakshanajanya Pandu*<sup>14</sup>

*Mridbhakshana* (habitual intake of soil) is the primary causative factor for this type of *Pandu Roga*. Soil with *Madhura Rasa* aggravates *Kapha Dosha*, soil with *Lavana Rasa* vitiates *Pitta Dosha* and soil with *Kashaya Rasa* disturbs *Vata Dosha*. The condition leads to *Bala-Varna-Agni Nasha*, meaning loss of strength, deterioration of complexion and weakened digestive power. Patients may develop *Shotha* (swelling) over the cheeks, around the eyes, eyebrows, feet, umbilical area and genital region. *Krimi* in the *Kostha* (intestinal worm infestation) may appear, along with *Atisara* where stools are mixed with blood and mucus.

***Samprapti:***

***Tridosha Prakopaka (Pitta Pradhana) Ahara***



***Aggrivation Sadhaka Pitta Located in Hridya***



***Driven out from Hridya by Vata Dosha***



***Enter in Dasha Dhaminya and circulates in all over the body***



***Causes Rasavaha Stroto-dusthi***



***Dusthi of Twaka, rakta, Mansa***



***Ashraya in Twaka, Mamsa Abhyantara***



***Awarodha of Bharajaka Pitta***



***Expressions of various varna on Twaka***



***Pandu Roga***

***Samprapti ghataka:***

***Dosha:* Pitta Pradhana Tridosha**

***Dushya:* Twaka, Rasa, Rakta, Mansa and Meda**

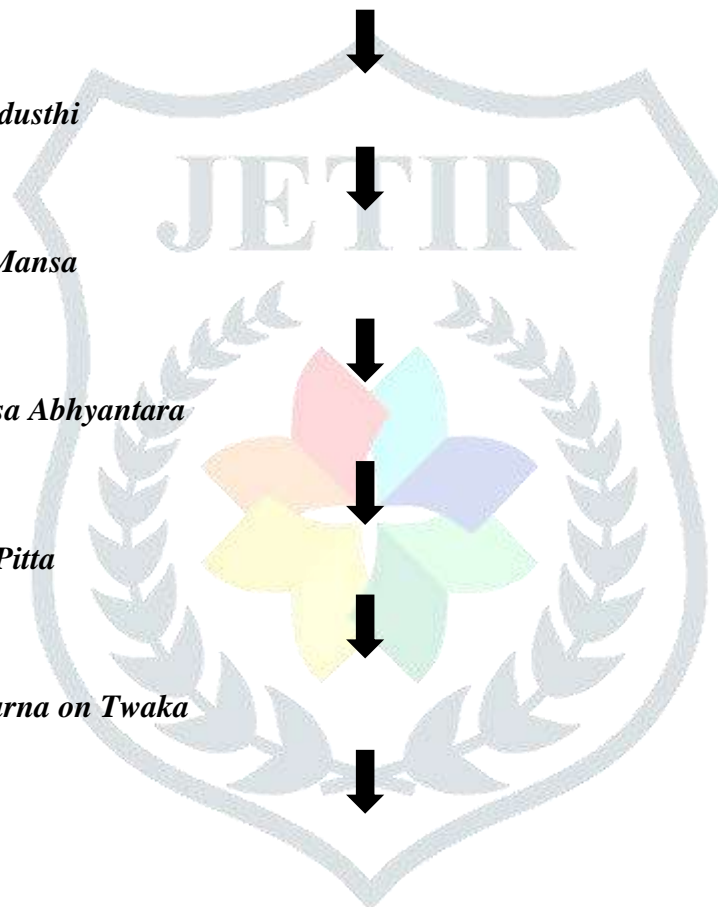
***Srotas:* Rasavaha, Raktavaha**

***Strotodushti:* Sanga, Vimarga Gamana**

***Agni:* Jatharagni, Dhatvagni**

***Agni Dusthi:* Mandagni**

***Udbhavsthana:* Amashaya**



**Adhithana:** *Twaka, Mamsa Abhyantara*

**Vyaktasthana:** *Twaka*

**Sancharasthana:** *Twaka and Mansa*

**Sadhya-Asadhyata**

In long-standing cases of *Pandu Roga*, when the *Dhatu* become *Khar* (rough and deteriorated) and no improvement is seen, the condition is regarded as *Asadhya* (incurable).<sup>15</sup> Such patients may develop *Shotha* (oedema) and tend to perceive their surroundings with a yellowish tint. As the disease advances, the body tissues become *Ruksha* (dry), resulting in a marked reduction in *Bala* (strength) and *Varna* (complexion), along with increasing swelling. Digestive issues appear in the form of constipation and loose stools mixed with greenish mucus. Gradually, the individual becomes *Deena* (weak and exhausted) and may experience episodes of *Murcha* (fainting) and *Trishna* (excessive thirst). These features indicate a poor prognosis, and the condition becomes progressively more difficult to manage.

## Discussion

*Pandu Roga* is described in classical *Ayurveda* as a systemic disorder involving *Rasa* and *Rakta Dhatu* with predominant *Pitta* involvement. Ancient texts such as *Charaka*, *Sushruta* and *Vagbhata* provide detailed accounts of its causes, pathogenesis and symptoms, many of which closely resemble modern descriptions of anaemia. Factors like improper diet, lifestyle errors, emotional disturbances and chronic illnesses contribute to *dosha* imbalance, impaired *Agni* and defective *Dhatu* formation. The variety of symptoms- pallor, fatigue, breathlessness, palpitations and digestive disturbances that correlates well with nutritional and haemolytic anaemias in contemporary medicine. The classification of *Pandu* into *Vataja*, *Pittaja*, *Kaphaja* and *Mridbhakshanajanya* forms highlights the Ayurvedic approach of individualized assessment. *Samprapti* emphasises disturbed *Pitta* and obstruction of *Bhrajaka Pitta*, explaining altered complexion and systemic weakness. When *Dhatu* become excessively depleted, the disease becomes *Asadhya*, reflecting poor prognosis similar to advanced anaemia. Overall, *Ayurveda* provides a holistic, multidimensional understanding of *Pandu Roga*.

## Anaemia

Anaemia is a common haematological disorder defined by a reduction in haemoglobin concentration or red blood cell mass, leading to impaired oxygen transport to body tissues. It affects individuals of all age groups, with increased prevalence among women, children and elderly populations. Anaemia results in clinical manifestations such as pallor, fatigue, breathlessness, dizziness and reduced physical and cognitive performance.

Based on aetiology and pathophysiology, anaemia is broadly classified into nutritional anaemia, haemolytic anaemia, anaemia of chronic disease, aplastic anaemia and anaemia due to blood loss. Nutritional anaemia is the most prevalent type and includes iron deficiency anaemia, vitamin B<sub>12</sub> deficiency anaemia and folate deficiency anaemia. Haemolytic anaemia is characterized by premature destruction of red blood cells, either inherited or acquired. Anaemia of chronic disease occurs secondary to chronic infections, inflammatory conditions or malignancies. Aplastic anaemia results from bone marrow failure, while acute or chronic blood loss leads to depletion of red blood cells and haemoglobin.

## Nutritional Anaemia

Nutritional anaemia is one of the most prevalent nutritional disorders worldwide and remains a major public health problem, particularly in developing countries. It occurs due to inadequate intake, absorption or utilization of essential nutrients required for haemoglobin synthesis and red blood cell production. Among the various causes, iron deficiency accounts for the majority of cases, followed by deficiencies of vitamin B<sub>12</sub> and folic acid. Nutritional anaemia commonly affects children, adolescent girls, pregnant women and the elderly.

Iron deficiency results from poor dietary intake, low bioavailability, chronic blood loss and increased physiological demands, leading to impaired oxygen transport and reduced work capacity. Vitamin B<sub>12</sub> and folate deficiencies cause megaloblastic anaemia due to defective DNA synthesis, often accompanied by neurological manifestations in vitamin B<sub>12</sub> deficiency. Clinically, nutritional anaemia presents with pallor, fatigue, weakness and breathlessness. Early diagnosis and appropriate nutritional correction, along with preventive dietary strategies, are essential to reduce its widespread health impact.

### Types of Nutritional Anaemia

Type of Nutritional Anaemia	Deficient Nutrient	Major Causes	Blood Picture	Common Clinical Features
Iron Deficiency Anaemia	Iron	Poor dietary intake, low bioavailability, chronic blood loss, parasitic infestation, increased demand (pregnancy, growth)	Microcytic, hypochromic RBCs; low Hb and serum ferritin	Pallor, fatigue, breathlessness, palpitations, pica
Folic Acid Deficiency Anaemia	Folic acid	Inadequate intake, malabsorption, increased requirement (pregnancy), chronic alcoholism	Macrocytic anaemia; increased MCV	Weakness, pallor, glossitis, gastrointestinal symptoms
Vitamin B <sub>12</sub> Deficiency Anaemia	Vitamin B <sub>12</sub>	Poor intake of animal foods, malabsorption, pernicious anaemia	Macrocytic anaemia; megaloblasts	Fatigue, pallor, neurological symptoms (tingling, numbness)
Protein Deficiency Anaemia	Protein	Severe malnutrition, chronic illness	Normocytic or mildly microcytic	Growth retardation, weakness, oedema
Mixed Nutritional Anaemia	Multiple nutrients	Poor diet, chronic disease, malabsorption	Mixed blood picture	Combined features of different deficiencies

### Correlation of Nutritional Anaemia with *Pandu Roga*

Modern Nutritional Anaemia	Deficient Nutrient	Ayurvedic Correlation	Involved Dosha & Dhātu	Key Features (Ayurveda–Modern Link)
Iron Deficiency Anaemia	Iron	<i>Pandu Roga</i> (especially <i>Pittaja</i> & <i>Mridbhakshanajanya Pandu</i> )	<i>Pitta-pradhana Tridosha</i> ; <i>Rasa &amp; Rakta Dhātu</i>	<i>Pandutva</i> (pallor), <i>Daurbalya</i> , <i>Shwasa</i> , <i>Pica</i> ↔ <i>Mridbhakshana</i>



Folic Acid Deficiency Anaemia	Folic acid	<i>Rasa–Rakta Kshaya Janya Pandu</i>	<i>Pitta with Rasa Dushti</i>	Fatigue, glossitis, impaired tissue formation
Vitamin B12 Deficiency Anaemia	Vitamin B12	<i>Vata-Pitta Pradhana Pandu</i>	<i>Vata involvement with Rakta Dushti</i>	Weakness, pallor, neurological features ↔ <i>Vata Lakshana</i>
Protein Deficiency Anaemia	Protein	<i>Dhatu Kshaya Janya Pandu</i>	<i>Kapha Kshaya; Rasa–Mamsa Dhatu</i>	Growth retardation, oedema, loss of strength
Mixed Nutritional Anaemia	Multiple nutrients	<i>Sannipataja Pandu</i>	<i>Tridosha Dushti</i>	Combined symptoms of various <i>Pandu</i> types

## Discussion

Pandu Roga, extensively described in classical Ayurvedic texts, represents a multifactorial systemic disorder involving *Rasa* and *Rakta Dhatu* with predominant *Pitta* involvement. The *Nidana*, *Samprapti* and clinical features of Pandu closely correspond to modern anaemia, particularly nutritional and haemolytic types. Dietary inadequacies, lifestyle errors, psychological disturbances and chronic diseases contribute to *Agni* impairment, *Dosha* imbalance, *Dhatu Kshaya* and *Bhrajaka Pitta* obstruction, manifesting as pallor, fatigue, breathlessness, digestive disturbances and systemic weakness. The Ayurvedic classification into *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja* and *Mridbhakshanajanya Pandu* reflects an individualized approach, aligning with modern subtypes of anaemia (iron, vitamin B<sub>12</sub>, folate, protein deficiency and mixed deficiencies). Notably, *Mridbhakshana* parallels iron deficiency anaemia with pica, demonstrating remarkable conceptual convergence. The *Samprapti* framework explains disease progression and prognosis, highlighting the importance of early intervention to prevent *Asadhya* (incurable) stages. Integration of classical therapeutic formulations, such as *Lauha Kalpa*, with modern supplementation underscores *Ayurveda's* early understanding of nutrient-based treatment.

## Conclusion

*Pandu Roga*, recognized since ancient times, is a multifactorial systemic disease primarily affecting *Rasa* and *Rakta Dhatu*. The classical descriptions, ranging from definitions and *Nidana* to *Samprapti* and clinical features, closely parallel the modern understanding of anaemia. The review highlights that improper diet, lifestyle errors, psychological disturbances and chronic diseases act as major causative factors, leading to impaired *Pachaka Agni*, *dosha* imbalance and depletion of tissues. The detailed classification of *Pandu* based on *Dosha* dominance allows individualized assessment and targeted management in Ayurveda. Traditional treatment approaches, particularly the use of iron-based formulations such as *Lauha Kalpa*, indicate that *Ayurveda* physicians had early insight into the importance of iron therapy in conditions resembling anaemia. In conclusion integrating Ayurvedic wisdom with modern biomedical understanding enhances the clinical relevance of *Pandu Roga*. This holistic perspective supports better diagnosis, preventive strategies, lifestyle modifications and therapeutic interventions, ultimately contributing to improved patient outcomes.

## Reference:

1. Vyasa, V. (1883–1896). *The Mahabharata of Krishna-Dwaipayana Vyasa* (K. M. Ganguli, Trans.; Vols. I–XX). Calcutta: Bharata Press.
2. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 7, 2010; 236.



3. *Sushruta samhita*, Kaviraja Ambika Dutta Shastri, *Uttra sthana* Chapter 44, Verse 3, Chaukhamba Surbharti Prakashan, 2013.
4. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 8, 2010; 236.
5. *Sushruta samhita*, Kaviraja Ambika Dutta Shastri, *Sutra sthana* Chapter 15, Verse 10, Chaukhamba Surbharti Prakashan, 2013.
6. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 12, 2010; 236.
7. *Sushruta samhita*, Kaviraja Ambika Dutta Shastri, *uttra sthana* Chapter 44, Verse 5, Chaukhamba Surbharti Prakashan, 2013.
8. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 13-16, 2010; 236.
9. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 18, 2010; 236.
10. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 19-22, 2010; 236.
11. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 23-25, 2010; 236.
12. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 13-16, 2010; 236.
13. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 26, 2010; 236.
14. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 27-29, 2010; 236.
15. *Charaksamhita* with the *Ayurved Dipika* commentary edited by Vaidya Yadavji Trikamji Acharya, Published by Chaukhamba Krishnadas Academy, Varanasi. *Chikitsa sthana*, Chapter 16, Verse 31-32, 2010; 236.