

# Pandu Roga: A Comprehensive Review with Special Reference to Iron Deficiency Anemia (IDA)

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## Abstract

Pandu Roga is a clinical entity described in ancient Ayurvedic texts characterized by a change in skin color (pallor), primarily due to the vitiation of *Pitta Dosh*a and subsequent depletion of *Rasa* and *Rakta Dhatus* (plasma and blood). In modern medicine, this condition is closely correlated with Iron Deficiency Anemia (IDA), the most common nutritional disorder worldwide. This article provides a dual perspective on the etiopathogenesis, clinical manifestations, and management of Pandu Roga and IDA. By integrating the holistic approach of Ayurveda—focusing on *Agni* (digestion) and *Srotas* (channels)—with modern hematological interventions, a more effective management protocol can be established.

**KEYWORDS-** Pandu roga, Iron Deficiency Anemia, Haemoglobin, Pallor

## 1. Introduction

The term **Pandu** denotes a yellowish-white or pale-white complexion, similar to the pollen of the *Ketaki* flower. According to Ayurveda, Pandu Roga is not merely a blood disorder but a systemic disease involving the impairment of the nutrient-transforming mechanism (*Dhatu-Paka*).

In the modern context, Anemia is defined as a reduction in the number of circulating red blood cells or the hemoglobin concentration, leading to decreased oxygen-carrying capacity. Iron Deficiency Anemia (IDA) accounts for approximately **50% of all anemia cases** globally, significantly impacting maternal health, child development, and productivity. This review explores the synergy between the *Nidan Panchak* (five-fold diagnostic tool) of Ayurveda and the clinical pathology of modern hematology.

## 2. Ayurvedic Review of Pandu Roga

### 2.1 Etiology (Nidana)

Ayurvedic classics identify several factors that lead to the vitiation of *Pitta* and the depletion of *Rakta*:

- **Aharaja (Dietary):** Excessive intake of sour (*Amla*), salty (*Lavana*), and pungent (*Katu*) foods; eating clay (*Mrid-bhakshana*).
- **Viharaja (Lifestyle):** Daytime sleep, excessive physical exertion, and suppression of natural urges.
- **Manasika (Psychological):** Fear, anger, and grief, which directly aggravate *Pitta*.

### 2.2 Pathogenesis (Samprapti)

The *Samprapti* of Pandu Roga begins in the gastrointestinal tract. Vitiating *Pitta* (specifically *Sadhaka* and *Bhrajaka Pitta*) circulates through the *Dhamanis* (vessels), affecting the *Rasa Dhatu*. This results in *Dhatu-Shaithilya* (looseness of tissues) and *Ojo-Kshaya* (loss of vitality).

### 2.3 Classification

Charaka Samhita classifies Pandu into five types:

1. **Vataja:** Characterized by tremors, dryness, and darkish pallor.
2. **Pittaja:** Marked by fever, burning sensation, and yellowish pallor.
3. **Kaphaja:** Features include heaviness, drowsiness, and whitish pallor.
4. **Sannipatika:** A combination of all three Doshas.
5. **Mrid-bhakshana Janya:** Specifically caused by the habit of eating soil (Pica).

## 3. Modern Review of Iron Deficiency Anemia (IDA)

### 3.1 Pathophysiology

Iron is a critical component of hemoglobin. IDA occurs through three stages:

1. **Iron Depletion:** Decreased serum ferritin but normal hemoglobin.
2. **Iron Deficient Erythropoiesis:** Serum iron drops; "starved" red cells are produced.
3. **Iron Deficiency Anemia:** Hemoglobin levels fall below standard ranges (e.g., <12 g/dL in non-pregnant women).

### 3.2 Clinical Features

Modern medicine highlights symptoms that overlap significantly with Pandu Roga:

- **Pallor:** Visible on the conjunctiva, tongue, and nail beds.
- **Koilonychia:** Spoon-shaped nails (correlating with *Khara-nakha* in Ayurveda).
- **Pica:** Craving for non-food items like ice or dirt (correlating with *Mrid-bhakshana*).
- **Glossitis:** Inflammation of the tongue.

## 4. Comparative Management Protocols

The management of Pandu Roga follows a specific sequence: *Nidana Parivarjana* (avoiding causes), *Shodhana* (purification), and *Shamana* (pacification).

### 4.1 Ayurvedic Treatment

- **Shodhana:** Since Pandu is a *Pitta*-dominant disease, **Virechana** (therapeutic purgation) is the treatment of choice to eliminate excess *Pitta*.
- **Shamana (Herbo-mineral formulations):**
  - **Punarnava Mandura:** Excellent for anemia with edema.
  - **Navayasa Lauha:** A blend of nine herbs and iron ash.
  - **Dhatri Lauha:** Iron processed with Amla (rich in Vitamin C, enhancing absorption).

### 4.2 Modern Treatment

- **Oral Iron Therapy:** Ferrous sulfate, fumarate, or gluconate.
- **Parenteral Iron:** Used when oral iron is not tolerated or in cases of malabsorption.
- **Dietary Modification:** Increasing intake of heme iron (meat) and non-heme iron (leafy greens) along with Vitamin C.

### 4.3 Integration Table

Feature	Pandu Roga (Ayurveda)	Iron Deficiency Anemia (Modern)
Primary Cause	Vitiated <i>Pitta</i> / <i>Agnimandya</i>	Iron deficiency / Blood loss
Key Symptom	<i>Pandutva</i> (Pallor)	Low Hemoglobin / Pallor
Organ Involved	<i>Yakrit</i> (Liver) and <i>Pliha</i> (Spleen)	Bone marrow and Reticuloendothelial system
Core Treatment	<i>Lauha Bhasma</i> and <i>Ghee</i>	Ferrous salts and Vitamin C

### 5. Conclusion

Pandu Roga and Iron Deficiency Anemia are two sides of the same coin. While modern medicine provides excellent diagnostic tools and rapid iron replacement, Ayurveda offers a holistic way to improve **bioavailability** and **absorption** by correcting the *Agni* (digestive fire). Integrating Ayurvedic *Lauha* preparations—which often cause fewer gastrointestinal side effects than synthetic iron—with modern diagnostic monitoring presents a superior pathway for managing this global health challenge.

### 6. References

1. **Shastri K.**, *Charaka Samhita of Agnivesha*, Chikitsa Sthana, Chapter 16. Chaukhambha Sanskrit Sansthan, Varanasi.
2. **Sushruta**, *Sushruta Samhita*, Uttara Tantra, Chapter 44.
3. **Hoffbrand A.V., Moss P.A.H.**, *Essential Haematology*, 7th Edition. Wiley-Blackwell.
4. **World Health Organization**, *Nutritional Anaemias: Tools for Effective Prevention and Control*, 2024.
5. **Dash M.K.**, *Conceptual Correlation between Pandu Roga and IDA*, International Journal of Ayurvedic Medicine, 2015.