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A CLINICAL CASE STUDY ON PANDU ROGA WITH EMPHASIS ON SARA PAREEKSHA IN IRON DEFICIENCY ANAEMIA

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ABSTRACT
Pandu Roga is a classical disease of Ayurveda in which the patient's body is pale, weak and less vital. It is very close to iron deficiency anaemia in modern science. In Ayurveda, qualitative analysis of the body tissues is given importance through Sara Pareeksha which is very important in early diagnosis and prognosis. This case study evaluates a 32-year-old female patient presenting with symptoms of weakness, calf pain, and exertional chest discomfort. Laboratory investigations confirmed anaemia, and Ayurvedic assessment correlated the condition with Twak Sara and Rakta Sara Kshaya. The study highlights the importance of integrating Ayurvedic diagnostic tools with modern investigations for better clinical outcomes.
KEYWORDS: *Pandu Roga, Iron Deficiency Anaemia, Sara Pareeksha, Twak Sara, Rakta Sara*

INTRODUCTION
The science of Ayurveda is founded on observation. The primary method used by doctors to assess health, illness, and treatment response is clinical observation. Ayurvedic practitioners were unaware of many contemporary studies in previous decades. However, the sophisticated modern period offers a wide range of studies that are now standard practice in Ayurveda. The evaluation of *Dhatu Sara Lakshana* is one such field. According to *Acharya Dalhana*, *Rasa Sarata* is best revealed on *Twak* and this might be the reason for *Rasa Sarata* being designated with the name of *Twak Sarata* [1]. *Pandu* is an illness that mimics "anaemia" in modern science and is characterized by pallor of the body. The person with this disease suffers from decreased blood amount, strength and complexion, becomes *Nihsara* (loss of natural integrity, tone and strength). [2] The *Preerana, Jeevana, Dharana*, and *Poshana Karma* of the body are thought to be significantly influenced by *Rasa* and *Rakta*. It is frequently observed that *Dosha* vitiates *Rasa* and *Rakta Dhatu* and diseases like *Pandu* are developed. In Ayurveda, *Pandu* is discussed under *Rasa pradoshaja Vikara* as a separate disease having different pathophysiology and treatment.[3] Iron deficiency affects approximately 600 million people, which is half of the world's anaemic population. Iron deficiency anaemia is when iron losses or physiological demands exceed the level of absorption. The main global causes of intestinal blood loss are schistosomiasis and hookworm infections. Iron is needed for many enzyme processes, for the transport of electrons in cells and for the formation of haemoglobin. Although poorly absorbed, non-haem iron in cereals and vegetables contributes more to total consumption than well-absorbed haem iron from animal products. Iron absorption is inhibited by the tannin in tea but is enhanced by fruits and vegetables containing vitamin C. This is one of the most important dietary factors leading to poor health in the world.[4] The demand for iron increases and may exceed absorption during periods of rapid growth such as infancy and puberty. CBC, total iron-binding capacity (TIBC), Sr. ferritin and other tests are available for this illness. To treat iron deficiency anaemia, oral iron replacement therapy (ferrous sulphate 200 mg three times a day) is recommended for three to six months in order to replenish iron stores. Most patients have a very good short-term prognosis. However, if the underlying cause is not corrected, the prognosis is poor. Considering *Panduta* (pallor) as the predominant sign, the disease is termed *Pandu Roga*.[5]

CASE REPORT
A 32-years-old Hindu female patient presented to the Research OPD of PG Department of Roga Nidana & Vikriti Vigyan, GAC & H, Balangir on 06/10/2025 with the following Chief complaints:
-General weakness for 2 months.
-Pain in both calf regions for 2 months.
-Exertion while working and chest pain for 15 days.

History of Present Illness
The patient was apparently normal 2 months back, after which she gradually developed generalized weakness and calf pain. Over the last 15 days, she experienced exertional breathlessness and chest discomfort on routine activities.

Past History
• No history of diabetes mellitus, hypertension, tuberculosis, or other chronic illnesses
• No history of previous surgeries
• No known allergies

Family History
• No such related family history found.
• No hereditary disorders reported

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Personal History
• Diet: Mixed, adequate quantity
• Appetite: Moderate
• Addiction: Tea (2–3 cups/day)
• Bowel and bladder: Regular
• Sleep: Disturbed
• Exercise: Only routine work

Menstrual History
Age of menarche- 14 yrs.
Duration=2-3 days
LMP- 07/10/2025
Interval 30-33 days
Quantity: Scanty
Menstrual phase: Irregular and Painless

Dashavidha Pariksha
1. Prakriti: Vata Kaphaja
2. Vikriti: Madhyama Bala Vyadhi
3. Sāra: Alpa Sara Purusha
4. Samhanana: Madhyama
5. Pramāna: Hina Sharira
6. Satwa: Madhyama Satwa
7. Satmya: Madhyama
8. Ahāra Shakti: Madhyama
9. Vyayāma Shakti: Avara Bala
10. Vaya: Madhyama Vaya

Ashtavidha Pariksha
1. Nadi: Vāta-Kaphaja (75/min)
2. Mutra: Prakrita varna, Madhyama Mātra
3. Mala: Nirama, regular
4. Jihwa: Prakrita varna, Sushka
5. Shabda: Spastha
6. Sparsha: Snigdha
7. Drik: Prakrita
8. Akriti: Krisha

On Examination
 The general condition of the patient is stable,
 Pulse rate- 75/ min,
 Bp-110/70mmhg,
 Pallor- ++, jaundice absent,
 Cyanosis and Clubbing - absent
 Edema and Lymphadenopathy- absent
 Weight-46kg,
 Height-148 cm
 Temp.- 98.6^0 F

Laboratory Investigations
CBC Findings –
WBC Count: 7800/mm^3
Haemoglobin (Hb): 9.7 g/dL (Low)
RBC Count: 5.27 million/mm^3 (slightly high)
HCT: 32.5% (Low)
MCV: 62 fL (Low → microcytic)
MCH: 18.4 pg (Low)
MCHC: 29.8 g/dL (Low)
RDW: 22.9% (Increased)
Platlets Count: 169/mm^3
ESR: 35 mm/hr (Increased)
Peripheral smear: Microcytic hypochromic anaemia, Anisopoikilocytosis and Pencil cells seen.

***Sara Pareeksha* Assessment**
Observation:
Twak Sara-Dryness, dullness (early stage)
Rakta Sara-Pallor, weakness, fatigue
Provisional Diagnosis: *Pandu Roga* (*Madhyama Bala*)
Modern Correlation: Iron Deficiency Anaemia (Microcytic Hypochromic Anaemia)
Clinical Assessment: The following subjective parameters were assessed in grades as per present or absent in this study. For absent, grade (0) & for present, grade (1) were applied. For haematological investigations, grades were given like 1,2,3 on the basis of severity.

SUBJECTIVE PARAMETERS

LAKSHANA	**Grade on 0^{th} day**
SNIGDHA TWAK	1
SLAKSHNA TWAK	0
SUKUMARALOMA	1
UCCHA SABDA ASAHISHNUTA	1
HRIDAYA SHULA	1
SNIGDHA KARNA	1
SNIGDHA AKSHI	1
SNIGDHA MUKHA	1
SNIGDHA JIHWA	0
SNIGDHA OSHTHA	0
SNIGDHA PANIPADATALA	0
SNIGDHA NAKHA	1
RAKTABHA KARNA	0
RAKTABHA AKSHI	0
RAKTABHA MUKHA	0
RAKTABHA JIHWA	0
RAKTABHA OSHTHA	0

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RAKTABHA PANIPADATALA	0
RAKTABHA NAKHA	0
SPHUTITA TWAK	0
MLANA TWAK	0
RUKSHA TWAK	0

OBJECTIVE PARAMETERS

PARAMETERS	Grade on 0th day	Patient's Value
Hb%	9.7 g/dL	2
RBC Count	5.27 million/mm³	2
MCV	62 fL	3
MCH	18.4 pg	3
MCHC	29.8 g/dL	2
HCT	32.5%	2
RDW	22.9%	2
ESR	35 mm/hr	3
PBS	Microcytic hypochromic RBCs	3

OBSERVATION AND RESULTS

In the present case of a 32-year-old female patient, clinical examination revealed pallor (++), generalized weakness, calf pain, and exertional chest discomfort, indicating reduced functional capacity. *Dashavidha Pariksha* showed *Alpa Sara Purusha* with involvement of *Twak* and *Rakta Sara*, while *Ashtavidha Pariksha* findings such as *Vata-Kaphaja Nadi* and *Sushka Jihwa* supported the diagnosis of *Pandu Roga*. Subjective assessment demonstrated the presence of certain *Snigdha Lakshana* (*Twak, Karna, Akshi, Mukha, Nakha*) and absence of *Raktabha Lakshana*, indicating qualitative depletion of *Rakta Dhatu*. Laboratory investigations revealed haemoglobin of 9.7 g/dL, low MCV (62 fL), MCH (18.4 pg), and MCHC (29.8 g/dL), along with increased RDW (22.9%) and ESR (35 mm/hr). Peripheral smear showed microcytic hypochromic anaemia with anisopoikilocytosis and pencil cells. Grading of parameters indicated moderate to severe derangement in hematological indices (Grade 2–3) and reduced expression of *Sara Lakshana*, establishing a clear correlation between *Pandu Roga* and iron deficiency anaemia.

DISCUSSION

Pandu Roga is primarily a disorder of *Rasa* and *Rakta Dhatu*, where impaired nourishment leads to *Panduta*, weakness, and reduced vitality. In the present case, *Alpa Sara Lakshana*, absence of *Raktabha Lakshana*, features of *Rukshata* in *Jihwa*, etc. suggest qualitative depletion of *Dhatu*, especially *Rakta Dhatu*. Regular intake of tea known to inhibit iron absorption may have acted as a causative factor. The haematological profile showing low haemoglobin, reduced MCV, MCH and MCHC with increased RDW and characteristic peripheral smear findings confirms microcytic hypochromic anaemia due to iron deficiency. Correlation between diminished *Sara Lakshana* and abnormal laboratory indices shows that *Sara Pareeksha* can reflect early tissue level changes effectively. Thus, this case demonstrates that integration of Ayurvedic parameters with modern diagnostic tools gives a better understanding of *Pandu Roga*.

CONCLUSION

This case study highlights a significant correlation between *Pandu Roga* and iron deficiency anaemia, demonstrating that *Sara Pareeksha* is a valuable diagnostic tool for assessing the qualitative status of *Dhatu*, particularly *Rasa* and *Rakta Dhatu*. The absence of *Raktabha Lakshana* and features of *Alpa Sara* were found to correspond with haematological abnormalities, indicating that Ayurvedic assessment can identify early tissue-level changes even before severe clinical deterioration. Therefore, integrating classical diagnostic methods like *Sara Pareeksha* with modern laboratory investigations provide a more comprehensive and holistic approach to diagnosis, prognosis, and management, ultimately improving clinical outcomes in patients of *Pandu Roga*.

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