

A Clinical Investigation of Kautajadi Shilajatu in Pandu with Regard to Iron Deficiency Anemia- A Single Case Study

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ABSTRACT

Introduction: Nutritional iron deficiency is a predominant cause of anaemia in India, often correlated with Pandu Roga in Ayurveda. This study explores the efficacy of Kautajadi Shilajatu in treating iron deficiency anaemia (IDA).

Methods: A 33-year-old female with fatigue, weakness, and a haemoglobin level of 8.2 g/dL was treated with Kautajadi Shilajatu over three months. The treatment regimen included 250 mg tablets administered twice daily post meals. Clinical features and hematological parameters were documented pre- and post-treatment.

Results: Post-treatment, the patient exhibited significant symptomatic relief, including reduced pallor, increased energy levels, and decreased hair fall. Hemoglobin levels improved to 9.1 g/dL. No adverse effects were reported during the study.

Discussion: Kautajadi Shilajatu, containing Deepan and Pachan herbs like Musta and Shunthi, enhances digestion and nutrient absorption, promoting the formation of high-quality Rasadhātu. Its Rasayana and Balya properties improve overall vitality and hemoglobin levels by boosting iron metabolism and balancing doshas.

Conclusion: Kautajadi Shilajatu demonstrates significant efficacy in managing IDA by improving clinical symptoms and hemoglobin levels. It offers a cost-effective, well-tolerated alternative to conventional treatments, warranting further research for broader clinical application.

Keywords: Iron Deficiency Anaemia, Pandu Roga, Ayurvedic Medicine, Kautajadi Shilajatu.

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INTRODUCTION

Pandu Roga, characterized by a yellowish-white discoloration of the skin, is extensively discussed in Vedic and Ayurvedic literature. It can be considered both a distinct illness and a symptom of other diseases.¹ In Ayurveda, Panduroga closely resembles the clinical picture of anaemia, particularly iron deficiency anaemia (IDA).¹ Individuals suffering from Panduroga exhibit decreased strength (Bala), complexion (Varna), and vital elements like Sneha, Meda, and Oja. The condition leads to a loss of natural integrity, tone, and strength (Nihsara) and results in weakened sensory organs (Shithilendriya). The primary pathogenesis involves the vitiation of Pitta Pradhana Vatadi Dosha and Raktadhātu, with the predominant role of Bhrajaka Pitta Dosha leading to Pandu Roga.²⁻⁵

Prevalence

Anaemia, characterized by low blood haemoglobin concentration, is a global public health problem affecting all economic strata and has severe health, social, and economic consequences. According to the World Health Organization (WHO), anaemia affects 33% of the global population. It is particularly prevalent among children aged 6-59 months (40%), pregnant women (37%), and women aged 15-49 years (30%).^{6,7} Anaemia can lead to symptoms such as tiredness, weakness, dizziness, drowsiness, and

shortness of breath, especially upon exertion. Iron deficiency anaemia (IDA) significantly impacts cognitive and motor development, productivity, and, in pregnancy, can result in low birth weight and increased maternal and perinatal mortality.⁸⁻¹⁰

The Importance of Treatment

The high cost and side effects of modern medical treatments for anaemia make them inaccessible to the economically disadvantaged, who are the most affected by the condition. Traditional Ayurvedic treatments offer cost-effective alternatives with fewer side effects. Classical Ayurvedic texts list numerous formulations for the treatment of Pandu Roga. Among these, Kautajadi Shilajatu (as mentioned in Charaka Samhita, Chikitsa Sthana 16/87-92) is significant and have been used successfully since ancient times. This study aims to see the efficacy of Kautajadi Shilajatu formulations to determine the more effective treatment for IDA.

Case Report

A 33-year-old female patient, non-diabetic and non-hypertensive, presented to Mandsaur Institute of Ayurved Education and Research (M.I.A.E.R), Hospital, Mandsaur, Madhya Pradesh, with complaints of fatigue and weakness after doing daily work and walking from last 1 year, cramps in the calf region specially in nights from 3 months and

Table 1: Gradation for Panduta present in Twak, Nakha, Netra, Jivha and Hastapadta

Criteria	Grading
None	0
Present at one site (0-1)	1
Present at 1 – 3 site (0-1)	2
Present at all the 5 sites	3

Table 2: Gradation for Daurbalya

Criteria	Grading
None	0
Sits up and down in 3 min more than 15 times	1
Sits up and down in 3 min 10-15 times	2
Sits up and down in 3 min less than 8 times	3

Table 3: Gradation for Aarohanaayas Vishesh Shwas (Dyspnoea)

Criteria	Grading
None	0
Dyspnoea stepping upto >20 steps	1
Dyspnoea stepping between 10 – 20 steps	2
Dyspnoea stepping upto < 10 steps	3

sometimes dyspnoea. Her menses were consistent. Her body was slender with a prominent bone structure, and her skin was dry and colorless. Her medical history was otherwise unremarkable.

History of Past Illness

No such relevant past history found.

Past Surgical History

No such relevant past surgical history found.

Family History

No any family member having same complaint.

Personal History

- Ahara: Mixed diet
- Appetite: loss of appetite
- Kosta: madhyam
- Nidra: Alpa
- Addiction: no addiction

General Examination

- Built: Thin
- BP: 110/70 mm of Hg
- Pulse: 70/min.
- Temperature: 98.7 °F
- Tongue: Coated
- Pallor: ++
- Icterus: Absent
- Cyanosis: Absent
- Weight- 45 kg
- Height- 140 cm
- CVS- S1 and S2 normal
- RS- Breathlessness present after walking, Bilateral symmetrical
- CNS- conscious, oriented

Investigations

On her complete blood count, following values were found. Haemoglobin level- 8.2 gm %

Table 4: Gradation for Pindikodweshtan

Criteria	Grading
None	0
Only during heavy work like exercise, running etc.	1
During normal routine light work like walking etc.	2
Continuously throughout day even during resting condition.	3

Table 5: Gradation for Sadan (Fatigue)

Criteria	Grading
None	0
Little fatigue in doing hard work.	1
Moderate fatigue in doing routine work	2
Excessive fatigue even in doing little work	3

Table 6: Gradation for Gaurav (Heaviness)

Criteria	Grading
None	0
Occasionally feeling of heaviness for sometimes in head region.	1
Feeling of heaviness for sometimes in head region not affecting activities of daily living.	2
Daily feeling of heaviness all over head region.	3

Table 7: Gradation for Hemoglobin Percentage

Criteria	Grading
For Male Hb% - 13gm/Above 13gm, For female Hb% - 12gm/ Above 12gm	0
For Male Hb% - 11gm -12.9gm, For female Hb% - 11gm – 11.9gm	1
For Male Hb% - 8gm -10.9gm, For female Hb% - 8gm – 10.9gm	2
For Male Hb% - < 8gm, For Female Hb% - < 8gm	3

The case was examined thoroughly and with the patient's written consent, she decided to undergo Ayurvedic Shaman Aushadhi for a period of 3 months.

Assessment Criteria

1/2023/ICD-11-3A00^{11,12}

The ICD-11 is the eleventh revision of the International Classification of Diseases (ICD) Assessment will be done on Subjective and objective parameters observed before and after completion of treatment. For this purpose, the gradations have been made as per the absence, intensity of the subjective and objective criteria. Gradation will be done as:

G0 – Absent G1 – Mild

G2 – Moderate G3 – Severe

Subjective Parameters¹³

1. Panduta present in Twak, Nakha, Netra, Jivha and Hastapadta [Table 1]
2. Daurbalya [Table 2]
3. Aarohanaayas Vishesh Shwas (Dyspnoea) [Table 3]
4. Pindikodweshtan [Table 4]
5. Sadana (Fatigue) [Table 5]
6. Gaurav (Heaviness) [Table 6]

Objective Parameters

Hb% [Table 7]

Table 8: Treatment given to the patient along with dose and mode of administration

	Dose	Time Of Administration	Route of Administration	Anupana
Kautajadi Shilajatu	250mg × 2Tab	Morning - evening after meals	Oral	Lukewarm water

Table 9: Kautajadi Shilajatu (250mg) tab content with quantity

Sr. No.	Content	Quantity
1	Shilajit (Asphaltum)	50mg
2	Khadisakhar (Rock Candy Sugar)	50mg
3	Vansha Lochan (Bambusa Arun Dinacea)	7mg
4	Ringani Fal (Solanum Surattense)	7mg
5	Pimpali (Piper Longum)	7mg
6	Amalaki (Embica Officinalis)	7mg
7	Karkatshrungi (Pistacia Chinensis)	7mg
8	Tamalpatra (Cinnamomum Tamala)	7mg
9	Dalchini (Cinnamomum Zeylanicum)	17mg
10	Ela (Elettaria Cardamomum)	17mg
11	Excipients	74mg
Bhavana Dravya		
12	Indrajav Kadha (Holarrhena Antidysenterica)	100ml
13	Musta Kadha (Cyprus Rotundus)	100ml
14	Nimb Kadha (Azadirachta Indica)	100ml
15	Haritaki Kadha (Terminalia Chebula)	33ml
16	Behada Kadha (Terminalia Belerica)	33ml
17	Amalaki Kadha (Embilica Officinalis)	33ml
18	Sunthi Kadha (Zingiber Officinale)	100ml

Laboratory Investigations

1. Hb%

Treatment Plan

After the Samyaka Pariksha of Roga and Rogi, the treatment schedule of 3 months was planned. No specific dietary regimen was advised during the whole treatment procedure.

Treatment given to the patient along with dose and mode of administration [Table 8]

Duration of the Study- 3 months

Follow Up - On 30th, 60th & 90th days of treatment.

Content of Kautajadi Shilajatu¹⁴

Each Kautajadi Shilajatu (250mg) tab contains: [Table 9]

OBSERVATION AND RESULT

Grading of subjective and objective criteria before and after treatment: [Table 10]

DISCUSSION**Pandu Roga and Anaemia**

Pandu Roga, as described in Ayurveda, shows a clinical picture similar to Anaemia, including symptoms like pale or yellowish-white skin discoloration and decreased strength. Anaemia, defined by low blood haemoglobin levels, is a significant global health issue with adverse health, social, and economic impacts.

Ayurvedic Pathophysiology

In Ayurveda, Pandu Roga is caused by the vitiation of Pitta Pradhana Vatadi Dosha and Raktadhatu. This leads to symptoms due to imbalances in the body's systems,

Table 10: Grading of subjective and objective criteria before and after treatment

	Before Treatment	After Treatment
SUBJECTIVE CRITERIA		
1 Panduta presenr in Twak, akha, Netra, Jivha and hastapadtal	Grade 2	Grade 1
2 Daurbalya	Grade 3	Grade 1
3 Aarohanaayas	Grade 2	Grade 1
4 Pindikodweshtan	Grade 2	Grade 1
5 Sadan	Grade 2	Grade 1
6 Gaurav	Grade 1	Grade 1
OBJECTIVE CRITERIA		
1 Hb%	8.2 gm%	9.1 gm%

particularly affecting the blood and skin.

Challenges with Modern Medicine

Modern treatments for Anaemia, like iron supplements, can be costly and have side effects (e.g., nausea, constipation, diarrhoea), making them less accessible and tolerable for low-income populations.

Kautajadi Shilajatu

There are other dravyas of Katu-Katu-Ushna in Kautajadi Shilajatu, with Deepan and Pachan leading to Aganivardhan. For example, Musta, Shunthi, Pippali mul, and Kutaj. Rasayan and balya are in operation when more dravyas, such Shilajatu, Amalaki, and others, have Deepan and Pachan karma, which results in qualitative rasadhatu nirman. Just as the pachan causes rasdhatu nirman and poshan, so does balvrudhhi, which in turn causes dhatu shaithilya nashan. As Pachan, Vat-Pitt shaman with Rasayan and Bruhan, Kutajadi Shilajatu might have demonstrated greater efficacy in relieving Bhram.

Kautajadi Shilajatu is an effective Ayurvedic formulation for treating Pandu Roga (Anaemia). Its blend of Deepan and Pachan herbs, along with Rasayana and Balya properties, enhances digestion, nutrient absorption, and haemoglobin levels. This holistic approach addresses both the symptoms and underlying causes of anaemia, making it a valuable treatment option. Further research and clinical trials could support its integration into broader healthcare practices, providing a cost-effective alternative for managing anaemia, especially in low-income populations.

CONCLUSION

This study supports the use of Kautajadi Shilajatu as a viable, cost-effective alternative to conventional iron supplements for treating IDA. The formulation's holistic approach, focusing on improving digestion and nutrient absorption through its Deepan and Pachan properties, along with its Rasayana and Balya effects, makes it a promising option, particularly for populations that are economically disadvantaged and prone to the side effects of allopathic iron treatments.

Kautajadi Shilajatu shows significant potential in the

management of Pandu Roga (IDA), with improvements in clinical features and haemoglobin levels without adverse effects. Further research and larger clinical trials are recommended to confirm these findings and explore the broader applicability of this Ayurvedic formulation in treating anaemia.

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