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Integrative Management of Iron Deficiency Anaemia Using Ayurvedic and Siddha Approaches: A Clinical Experience

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Abstract
Iron deficiency anaemia (IDA) is a common nutritional disorder characterized by reduced haemoglobin levels and may present with fatigue, weakness, dizziness, breathlessness, anorexia, and pallor. In Ayurveda, IDA is clinically correlated with *Pandu roga*. A 23-year-old female presented to outpatient department with generalized weakness, anorexia, tastelessness of food, pallor, lethargy, exertional breathlessness, dizziness, excessive sleep with daytime drowsiness since 3 months and laboratory investigations revealed a haemoglobin level of 8.5 g/dL. *Samana Chikitsa* (Pacifying) was administered using an integrative Ayurvedic and Siddha approach, with emphasis on correction of *Agni* (Digestive fire) and *Rasa-Rakta Dhatu Prasadana* (Nourishment of the Rasa and Rakta). The intervention included *Drakshadi Kashayam, Avipattikara Choorna*, Bloddwin Syrup, *Annabhedi Chendooram,* and *Dadimadi Ghrita*. Progressive clinical and haematological improvement was observed during the follow-up period. Haemoglobin increased from 8.5 g/dL at baseline to 10.8 g/dL, 11.7 g/dL, and 12.1 g/dL at successive follow-ups. Red Blood Cell (RBC) count increased from 4.07 to 4.73 million/cmm, while Packed Cell Volume (PCV) improved from 25.4% to 36.5%. This case suggests that an integrative Ayurvedic and Siddha approach may provide supportive benefit in the management of IDA. However, controlled clinical studies are required to establish efficacy and safety.

Keywords: Annabhedi Chendooram, Ayurveda, Bloodwin Syrup, Dadimadi ghritam, Iron Deficiency Anaemia, Pandu

INTRODUCTION

Anaemia is a haematological disorder characterized by a reduction in the circulating red blood cell (RBC) mass, as evidenced by decreased haemoglobin concentration, haematocrit, or red blood cell count below the normal reference range[1]. It is also one of the most prevalent nutritional disorders worldwide, affecting nearly one-third of the global population, with iron deficiency being the leading cause. According to the World Health Organization (WHO), approximately two billion people, representing about 25% of the world's population, are affected by anaemia, and nearly half of these cases are attributed to iron deficiency anaemia (IDA)[2]. The aetiology of iron deficiency anaemia is multifactorial, with the most common contributing factors including inadequate dietary iron intake, impaired iron absorption, chronic blood loss (e.g., heavy menstrual bleeding or gastrointestinal bleeding), and increased physiological iron

requirements during pregnancy and childhood [3]. The reduced oxygen-carrying capacity associated with IDA be lead to symptoms such as fatigue, dyspnoea, palpitations, tachycardia, and angina. The resulting tissue hypoxia can lead to compensatory redistribution of blood flow away from the gastrointestinal tract, potentially causing impaired intestinal motility, malabsorption, nausea, weight loss, and abdominal pain. Furthermore, cerebral hypoxia may contribute to neurological manifestations, including headache, vertigo, lethargy, and cognitive impairment [4]. However, insufficient dietary iron intake, together with the presence of inhibitors of iron absorption, often makes iron supplementation necessary. A variety of oral and parenteral iron formulations, including ferrous and ferric salts, are available for the treatment of iron deficiency anaemia. However, long-term use of these preparations is commonly associated with gastrointestinal adverse effects such as constipation, heartburn, nausea, gastric discomfort, and diarrhoea [5].

In Ayurveda, the clinical features of IDA closely resemble those of *Pandu roga*, characterized predominantly by *Panduta* (Paleness), derangement of *Pitta Dosha* and depletion of *Rakta dhatu* (Blood tissue). Ayurvedic management aims to correct the underlying pathophysiology by improving *Agni* (digestive and metabolic function), restoring the integrity of *Rakta Dhatu*, and promoting overall health and well-being. The present case report describes the Ayurvedic management of a patient with IDA using Ayurvedic medications along with strict adherence to *Pathya-Apathya* (appropriate dietary and lifestyle measures), resulting in significant clinical and haematological improvement.

CASE PRESENTATION

A 23-year-old female patient presented to the Outpatient Department (OPD) of S.K.M. Chikitcchalaya on July 22, 2025, with complaints of generalized weakness, loss of appetite, tastelessness of food, pallor, lethargy, exertional breathlessness during routine activities, dizziness, and excessive sleep (>8 hours/day) associated with daytime drowsiness for the past three months. She also had a history of irregular menstrual cycles.

On general examination, the patient's vital parameters were as follows: pulse rate 78 beats/min, blood pressure 110/70 mmHg, respiratory rate 12 breaths/min, weight 45 kg, and height 160 cm. Pallor was present (++), while icterus was absent. Cardiovascular examination revealed normal first and second heart sounds (S1 and S2) with no added or abnormal sounds. The patient was conscious, alert, and well oriented to time, place, and person. Laboratory investigations revealed a reduced haemoglobin (Hb) level of 8.5 g/dL on complete blood count (CBC), suggestive of anaemia.

Timeline

Day-to-day clinical events for this case are mentioned in Table 2.

Diagnostic assessment

The diagnostic assessment was carried out on the basis of subjective and objective parameters. In subjective parameters, symptoms such as breathlessness, dizziness, paleness, excessive sleep, fatigue, and anorexia were taken (table. 1). On the other hand, CBC were taken as the objective parameters.

TABLE. 1: Assessment criteria for subjective parameters [6]

Paleness (The paleness of the skin, nails, tongue, conjunctiva, palms, and soles was taken into consideration)	
Symptoms	Score

Absent	0
In any 2 of these	1
In any 3 of these	2
In any 4	3
In all of these	4

Breathlessness	
Symptoms	Score
Absent	0
Present after heavy work, quickly relieved, and bearable	1
Present after a moderate amount of work, later on relieved, and manageable	2
Present after minimal efforts, later on relieved, and bearable	3
Present even resting condition	4

Dizziness	
Symptoms	Score
Absent	0
Occasional	1
Frequently	2
Regular	3
Constant	4

Anorexia	
Symptoms	Score
Normal desire for food	0
Eating on time without much desire	1
Food craving, a little later than usual	2
Craving for food only after a prolonged period of time	3
No urge to eat at all	4

Fatigue	
Symptoms	Score
No fatigue	0
Little fatigue in doing hard work	1
Moderate fatigue	2
Excessive fatigue in doing routine work	3
Excessive fatigue even in doing little work	4

Excessive sleep	
Symptoms	Score
6–7 hours of regular sleep each day	0
Sleep up to 8 hours a day while feeling drowsy	1

Get up to 8 hours of sleep everyday while feeling heavy and yawning 10 hours or more of sleep per day while feeling sleepy Sleeping for over 10 hours a day while feeling drowsy and exhausted	2 3 4

TABLE 2: Timeline of the case

Date	Medicines	Therapeutic Intervention
July 22, 2025	Patient came to OPD and on examination was found to be anaemic [Hb(g/dL): 8.5 g/dL]	*Drakshadi kashayam* 15ml before meal twice a day Bloddwin syrup 15ml after meal, thrice in a day *Avipathikara choornam* 4 grams, at bed time Advised *Pathya–Apathya* (Dietary regimen), as detailed below.
August 08, 2025	Follow-up I, Breathlessness and excessive sleep got reduced. Hb(g/dL): 10.8 g/dL	Bloddwin syrup 15ml after meal, thrice in a day *Annabedhi chendooram* 200 mg with honey after food, twice in a day
September 23, 2025	Follow-up II, breathlessness, dizziness, anorexia, fatigue, and excessive sleep had completely resolved (grade 0), while paleness improved from grade 3 at baseline to grade 1. Hb(g/dL): 11.7 g/dL	Bloddwin syrup 15ml -15ml-15ml a/f *Annabedhi chendooram* tab 2-0-2 a/f *Dadimadi ghritam* 10 ml orally, once daily in the morning on an empty stomach.
October 10, 2025	Follow-up II, significant improvement noticed in all the subjective and objective parameters. Hb(g/dL): 12.1 g/dL	*Annabedhi chendooram* tab 2-0-2 a/f *Dadimadi ghritam* 10 ml orally, once daily in the morning on an empty stomach.
Pathya ahara – Gooseberry, Pomegranate, Dried nuts & raisins, Dates, Spinach, drumstick leaves (moringa), other dark green leafy vegetables, Ragi, Orange, Guava *Apathya ahara* – Tea, Coffee, Alcohol, Large amounts of milk or calcium supplements with iron-rich meals, processed foods, refined foods etc.		

TABLE 3: Subjective Parameters Assessment

Symptoms	Before treatment	Follow Up -1	Follow Up -2	Follow Up - 3
Paleness	3	2	1	0
Breathlessness	3	1	0	0
Dizziness	4	2	0	0
Anorexia	3	2	0	0
Fatigue	4	2	0	0
Excessive sleep	3	1	0	0

TABLE 4: Objective Parameters Assessment

Laboratory Parameters	Before treatment	Follow Up -1	Follow Up -2	Follow up - 3
Haemoglobin (Hb) [gm /dL]	8.5	10.8	11.7	12.1
Red Blood Cell Count (RBC) [million cells/cmm]	4.07	4.63	4.29	4.73
Packed Cell Volume (PCV) [%]	25.4	32.1	33.4	36.5

Follow up and Outcome

The patient was evaluated on each follow-up using subjective and objective parameters. Subjective assessment showed gradual improvement in all symptoms, with complete relief from breathlessness, dizziness, anorexia, fatigue, and excessive sleep by the second follow-up (Table. 3), while paleness reduced from a score of 3 to 0 by third follow-up. Objective assessment also showed improvement, with haemoglobin increasing from 8.5 g/dL to 12.1 g/dL, RBC count improving from 4.07 to 4.73 million/cmm, and PCV increasing from 25.4% to 36.5% (Table. 4). Overall, the patient showed significant clinical and haematological improvement during the follow-up period without any adverse events.

Image. 1: Investigation reports

Before Treatment

SKM CHIKITCHAALAYA
SIDDHA AND AYURVEDA HOSPITAL

Lab Report

Patient Name : [redacted] Age /Sex : 25/Female Report Date : 21-07-2025
Refer by : Dr.SUBHASHREE Bill No : DL-283400120

Sample Date & Time : 21-07-2025 12:10:00 Report Date & Time :21-07-2025 22:40:12

COMPLETE BLOOD COUNT

TEST NAME	VALUE	UNIT	NORMAL RANGE
Total WBC Count	13,300	Cells/ Cumm	5,000-10,000
Differential Count			
Polymorphs	73.4	%	50-70
Lymphocytes	21.7	%	20-40
Eosinophils	4.9	%	2-6
Haemoglobin	8.5	g/dl	(F) 12.0-14.0 - (M) 14.0-18.0
RBC	4.07	Millions/ Cumm	3.5-5.5
PCV	25.4	%	37-54
MCV	62.4	Pg	80-100
MCH	20.9	g/dl	27-34
MCHC	33.5	fl	30-36
Platelets	3,98,000	Cells/Cumm	1,50,000 - 4,50,000

Lab Technicians sig

Follow up 2

SKM CHIKITCHAALAYA
SIDDHA AND AYURVEDA HOSPITAL

Lab Report

Patient Name : [redacted] Age /Sex : 25/Female Report Date : 08-08-2025
Refer by : Dr.SUBHASHREE Bill No : DL-283400026

Sample Date & Time : 08-08-2025 15:11:01 Report Date & Time :08-08-2025 19:40:12

COMPLETE BLOOD COUNT

TEST NAME	VALUE	UNIT	NORMAL RANGE
Total WBC Count	9,000	Cells/ Cumm	5,000-10,000
Differential Count			
Polymorphs	58.0	%	50-70
Lymphocytes	34.8	%	20-40
Eosinophils	7.2	%	2-6
Haemoglobin	10.8	g/dl	(F) 12.0-14.0 - (M) 14.0-18.0
RBC	4.63	Millions/ Cumm	3.5-5.5
PCV	32.1	%	37-54
MCV	69.4	Pg	80-100
MCH	23.4	g/dl	27-34
MCHC	33.7	fl	30-36
Platelets	5,51,000	Cells/Cumm	1,50,000 - 4,50,000

Lab Technicians sig

Follow up 1

SKM CHIKITCHAALAYA
SIDDHA AND AYURVEDA HOSPITAL

Lab Report

Patient Name : [redacted] Age /Sex : 25/Female Report Date : 21-07-2025
Refer by : Dr.SUBHASHREE Bill No : DL-283400120

Sample Date & Time : 21-07-2025 12:10:00 Report Date & Time :21-07-2025 22:40:12

COMPLETE BLOOD COUNT

TEST NAME	VALUE	UNIT	NORMAL RANGE
Total WBC Count	13,300	Cells/ Cumm	5,000-10,000
Differential Count			
Polymorphs	73.4	%	50-70
Lymphocytes	21.7	%	20-40
Eosinophils	4.9	%	2-6
Haemoglobin	8.5	g/dl	(F) 12.0-14.0 - (M) 14.0-18.0
RBC	4.07	Millions/ Cumm	3.5-5.5
PCV	25.4	%	37-54
MCV	62.4	Pg	80-100
MCH	20.9	g/dl	27-34
MCHC	33.5	fl	30-36
Platelets	3,98,000	Cells/Cumm	1,50,000 - 4,50,000

Lab Technicians sig

Follow up 3

SKM CHIKITCHAALAYA
SIDDHA AND AYURVEDA HOSPITAL

Lab Report

Patient Name : [redacted] Age /Sex : 25/Female Report Date : 10-10-2025
Refer by : Dr.SUBHASHREE Bill No : DL-283400120

Sample Date & Time : 10-10-2025 11:00:00 Report Date & Time :10-10-2025 15:20:00

COMPLETE BLOOD COUNT

TEST NAME	VALUE	UNIT	NORMAL RANGE
Total WBC Count	6,850	Cells/ Cumm	5,000-10,000
Differential Count			
Polymorphs	53.8	%	50-70
Lymphocytes	38.8	%	20-40
Eosinophils	5.6	%	2-6
Haemoglobin	12.1	g/dl	(F) 12.0-14.0 - (M) 14.0-18.0
RBC	4.73	Millions/ Cumm	3.5-5.5
PCV	36.5	%	37-54
MCV	79.9	Pg	80-100
MCH	28.5	g/dl	27-34
MCHC	35.0	fl	30-36
Platelets	3,05,089	Cells/Cumm	1,50,000 - 4,50,000

Lab Technicians sig

DISCUSSION

Pandu is predominantly a *Pitta*-dominant disorder in Ayurveda. It develops due to the aggravation of *Sadhaka Pitta* following the excessive intake of alkaline, sour, salty, hot, and incompatible foods, as well as emotional factors such as worry, fear, anger, and grief. The aggravated *Sadhaka Pitta*, carried by *Vyana Vayu*, circulates throughout the body and vitiates *Vata*, *Kapha*, *Rakta*, *Twak*, and *Mamsa*, leading to the manifestation of *Pandu*[7]. In the present case the treatment was adopted on the basis of *Samana chikitsa* instead of *Shodhana chikitsa* (Purifying therapy). Therapeutic intervention focused on *Agni Deepana* (enhancing digestive fire), *Rasa–Rakta Prasadana* (improving the quality of plasma and blood), and *Mala Anulomana* (promoting normal bowel evacuation) and addressing the present symptoms of pandu. *Virechana Karma* (Purgation therapy) is one of the therapeutic measures described under the principles of treatment for *Panduroga* [8]. In the present study, *Avipattikara Choorna* was administered initially in *Samana matra* (Pacifying dose) to facilitate mild laxation. *Avipattikara Choorna*, owing to its *Deepana* (Appetizer), *Pachana* (Digestive) and *Saraka* (Flowing) properties, aids in restoring *Pitta* balance and facilitates the elimination of excess *Pitta* from the body through its mild laxative action [9].

Drakshadi Kwatha (DK) was administrated to address the *Pittakopa* (~aggravated *Pitta Dosha*). *Drakshadi Kashaya*[10], containing ingredients such as *Draksha* (*Vitis vinifera*), *Madhuka*(*Madhuca longifolia*) , *Yashtimadhu* (*Madhuca longifolia*), *Rodhra* (*Symplocos cochinchinensis*), *Kasmarya* (*Gmelina arborea*), *Sariva* (*Hemidesmus indicus*), *Musta (Cyperus rotundus), Amalaka (Phyllanthus emblica), Hribera (Plectranthus vettiveroides), Utpala (Monochoria hastata), Parushaka (Grewia asiatica)*, etc. DK is used in the first-line management of this case, helping to alleviate *Srama* (Tiredness) and *Bhrama* (Dizziness) through *Vata-Pitta Samana* and promote *Rasa-Rakta Prasadana*. The haematological benefits of its ingredients are supported by experimental evidence; Latif et al.[11] reported that *Grewia asiatica* improved haemoglobin, RBC count, and haematocrit in rats, while Al-Aboud et al.[12] observed a mild increase in haemoglobin, serum ferritin, and serum iron following *Vitis vinifera* consumption. These findings provide preliminary scientific support for the potential role of the constituent drugs of *Drakshadi Kashaya* in improving haematological and iron-status parameters.

Bloodwin syrup, a proprietary formulation containing *Aswagandha* (*Withania somnifera*), *Draksha (Vitis vinifera), Guduci (Tinospora cordifolia), Haridra (Curcuma longa), Yashti (Glycyrrhiza glabra), Haritaki (Terminalia chebula)* etc., was to support Hb and RBC levels. The combination offers *Rasayana* (Rejuvenative), *Panduhara*, *Brimhana* (Nourishing), *Anulomana* (facilitating normal downward movement of Vata) actions[13] [14] [15]. The syrup was administered throughout the follow-up period, during which the patient showed a progressive rise in haemoglobin from 8.5 g/dL to 12.1 g/dL.

Annabedhi Chendooram[16] is a classical Siddha herbo-mineral formulation traditionally indicated in *Veluppu Noi* (iron deficiency anaemia). It is prepared from purified *Annabedhi* (Ferrous sulphate) through specific *Shodhana* (Purification) and *Marana* (Incineration) procedures to enhance bioavailability and is generally administered in low doses along with *Anupana* (Adjuvant) such as honey. Ravi K et al. (2025) has reported *Annabedhi Chendhuram* was used as an active haematinic in women of reproductive age with iron deficiency anaemia, and reported improvement in haemoglobin levels with good tolerability[17]

Dadimadi ghritam[18] is a classical ayurvedic formulation indicated in *Pandu Roga Chikitsa*. Chikamane et al. reported that *Dadimadi Ghrita* showed significant improvement in Hb and serum iron levels in patients with *Pandu*. Its *Deepana* and *Yakrit utejaka* (Liver Stimulant) properties may help improve *Agni* and support *Rasa–Rakta Dhatu* formation. The *Deepana* and *Rasayana* ingredients may enhance digestion, assimilation, and tissue nourishment. These combined effects may contribute to improvement in *Panduta* and other clinical features of *Pandu*.[19].

These effects may Collectively support *Rasa-Rakta Dhatu* formation and nourishment, contributing to the improvement of Panduta (pallor) and other clinical features. The patient showed gradual clinical and haematological improvement with the integrated treatment. However, further studies with larger sample sizes are required to confirm these findings.

Conclusion

This present case demonstrated substantial clinical and haematological improvement in IDA through individualized Ayurvedic management. The patient experienced progressive relief from breathlessness, dizziness, anorexia, fatigue, excessive sleep, and pallor. Haematological parameters also improved, with Hb increasing from 8.5 to 12.1 g/dL, RBC count from 4.07 to 4.73 million/cmm, and PCV from 25.4% to 36.5%. No adverse events were reported during treatment. The therapeutic regimen, which included *Agni Deepana*, *Rasa–Rakta Prasadana*, *Anulomana*, and *Rasayana* therapies, may have contributed to the observed recovery. However, as the present findings are based on a single case, further well-designed clinical studies involving larger sample sizes are warranted to validate the observed therapeutic benefits and establish the efficacy and safety of this treatment approach in Pandu Roga.

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