



AYURVEDIC INTERVENTION IN THE MANAGEMENT OF PANDU ROGA (DIMORPHIC ANAEMIA)

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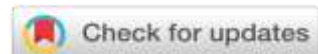
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ABSTRACT

Pandu Roga is an Ayurvedic ailment clinically comparable to many types of Anaemia. This study was done to establish the effect of Ayurvedic management on the patient of *Pandu Roga* (Dimorphic Anaemia). In the IPD, Arogyashala Rugnalaya, Nashik, from 08/01/2022 to 17/01/2022, A 69-year Male patient, suffering from *Pandu Roga* (Dimorphic Anaemia) was treated with Ayurvedic management. *Shamana Chikitsa* (ayurvedic medicinal treatment) And *Virechana Karma* (Therapeutic Purgation) were administered. The patient felt a significant increase in Hb g% and other hematological investigations. Symptoms were assessed as per the criteria of assessment, and improvement was seen in symptoms. *Panduta* (Pallor) 75%, *Daurbalya* (General weakness) 75%, *Ayasaja Shwasa* (Dyspnoea on exertion) 66.66%, *Pindikodveshtana* (Leg cramps) 50%, *Nidraluta* (Sleepiness) 50%, *Shiroruk* (Headache)100%, *Bhrama* (Giddiness)0%, *Sadana* (Fatigue) 66.66%, *Gatra Shoola* (Body aches) 66.66%, *Agnimandya* (Impaired appetite) 66.66%, *Aruchi* (Anorexia) 66.66%. This case study demonstrates that Ayurvedic management was significant in *Pandu Roga* (Dimorphic Anaemia).

Keywords: Ayurved, Dimorphic Anaemia, *Pandu Roga*, *Panchakarma*, *Virechana Karma*.

INTRODUCTION

India is one of the nations with a high prevalence of Iron Deficiency Anaemia. ^[1] Pencil cells are hypochromic variants of elliptocytes having long axes at least triple the length of the cell's short axis. ^[2] They have been traditionally described as smears of iron deficiency however, pencil cells may also be seen less commonly in Anaemia of chronic disease. ^[3] Dimorphic Anaemia is characterized by two different cell populations. One population is microcytic hypochromic, and the other is either normocytic or macrocytic. It's one of the *Rasavaha Srotodushti* according to *Charaka*, *Raktavaha Srotodushti* is how *Susruta* describes it. ^[4,5]

Patient Information:

A 69-year-old male having 60 kg body weight, a Shopkeeper, of *Vata-Pittaja Prakriti*, residing in an urban area of Nashik, was brought to *Kayachikitsa* IPD of Arogyashala Rugnalaya, Nashik Maharashtra, on 08/01/2022 with complaints of *Panduta* (Pallor), *Daurbalya* (General Weakness), *Aayasen Shwasa* (Dyspnoea), *Nidra Adhikya* (Excessive Sleep), *Aasya Vairasya* (Anorexia), *Naktamutrata* (Nocturnal Micturition), *Malavastambha* (Constipation), *Hridayaspandan* (Palpitation) in the last 8 days. The subject was a previously known diagnosed case of Ischemic Heart Disease, Diabetes Mellitus. He underwent *Ayurvedic* treatment for the same and was discharged after remarkable improvement.

Clinical Findings:

Physical examination, [Table 1] Systemic Examination, [Table 2] also *Ashtasthana Pariksha* (Eightfold examination), [Table 3] were observed at the time of admission.

Table 1: Physical examination

Vitals	Observations
Blood pressure	110/60 mm of hg
Pulse rate	90/min
Respiratory rate	18/min
Temperature	98.00 ^o f
Oedema	No
Pallor	Present
Icterus	No
Clubbing	No

Table 2: Systemic Examination

System	Observations	
Respiratory system	On auscultation, normal sounds were heard, and no abnormality was detected.	
Cardiovascular system	S1 S2 heard, and no abnormality detected.	
Gastrointestinal system	Soft, non-tender, no organomegaly detected	
Central nervous system	Consciousness	Fully conscious
	Orientation	Fully oriented to time, place, and person
	Memory	Intact
	Behavior	friendly

Table 3: Ashtasthana Pariksha (Eightfold examination)

Pariksha (examination)	Observations
<i>Nadi</i> (Pulse)	<i>Pittapradhana</i>
<i>Mala</i> (Stool)	<i>Vibhandata</i>

Mutra (Urine)	8-10 times per day, <i>Naktamutrata</i>
Jivha (Tongue)	<i>Saama</i>
Shabda (Speech)	<i>Vakspashtata</i>
Sparsha (Tactilation)	<i>Samashitoshma</i>
Druk (Eyes)	<i>Prakruta</i>
Akriti (Anthropometry)	<i>Madhyama</i>

Diagnostic Assessment:

The patient was diagnosed as a case of *Pandu Roga* provisionally based on the clinical signs and symptoms. The diagnosis was confirmed by performing routine blood investigations, and some specific investigations such as PBS, Blood Urea, Serum Creatinine, HIV 1 and HIV 2 Antibody Test, HBSAG, which was classified as *Pandu Roga* (Dimorphic Anaemia). [Table 4]

Sr.	Date	Investigations	Findings
1.	08/01/2022	PBS	R.B.C. Morphology: Microcytic +++, Macrocytic +, Hypochromic +++, Anisopoikilocytosis +, Pencil cells + Impression: Predominantly Microcytic Hypochromic Anaemia. Serum Iron: 43.4 Total Iron Binding Capacity: 273 Transferrin Saturation %: 15.9
2.	08/01/2022	Blood Urea	16 mg%
		Serum Creatinine	0.7 mg%
		HIV 1 and HIV 2 Antibody Test	Negative
		HBSAG	Negative
3.	20/09/2021	USG Abdomen and Pelvis	Mild to moderate prostatomegaly with significant post-void residue. Probe tenderness present in right iliac fossa; however minimal bowel wall thickening in the IC junction possibility of inflammatory/infectious changes in the bowel.
4.	17/09/2021	Examination Of Stool	Erythrocytes: 10-12/ hpf Bacteria: Present + Occult Blood: Present
5.	14/09/2021	Lipid Profile	Within Normal Limits
6.	13/09/2021	Serum creatinine	1.11 mg/dl
		Electrolytes	Within Normal Limits
		LFT	Within Normal Limits
		Urine Examination	Within Normal Limits
		HBA1C	6.36%
		Average Blood Glucose (ABG)	135.8mg/dl
7.	01/08/2019	Iron Studies	IRON – 8.06 TIBC - 483.2 Transferrin saturation – 1.67 Vitamin B12 – Below 50 Ferritin – 2.3

Therapeutic Intervention:

As the patient was admitted treatment started with *Shamana Chikitsa* (Ayurvedic medicinal treatment), [Table 5] and further plan for *Shodhana Chikitsa* (*Panchakarma*), The patient underwent *Virechana Karma* (Therapeutic Purgation) as per indication mentioned in the classics of Pandu roga. The patient underwent *Virechana Karma* in January 2022. [Table 6] First of all, *Deepana-Pachana* was initiated, after that *Snehapana* was started with an initial dose of 30 ml of *Dadimadi Ghruta* (Medicated Ghee), once a day followed by a light diet after proper digestion of the ghee. The amount of ghee was increased by 30 ml daily up to 120 ml on the 4th day as per protocol of *Snehana*. *Swedana Karma* was started on the 5th day for 3 consecutive days after the appearance of symptoms of *Snehana* on the 4th day. *Nadi Swedana* was

done once daily in the morning by performing whole body fomentation after *Tila Taila Abhyanga* (body massage). *Virechana Karma* was administered by *Trivrutta Avaleha* 30 gm + *Abhayadi Modak* 250 mg with *Koshnajala* (Lukewarm water) at 10 am (*Pitta Kala*) on the 8th day. About 3 hr later, *Virechana Vega* started, and 14 *Vega* (Passed Stool) were observed till the evening. From the 9th day onward, *Sansarjana Krama* (a process of resuming regular diet) was started by prescribing *Peya* (preparation of rice and water) and *Vilepi* (preparation of rice) and so on successively for 3 days. From the 4th day onward, a diet with the least spices was suggested. After completion of the *Sansarjana Krama*, the patient was put on a routine diet. Ayurvedic medications were prescribed at the time of discharge for 10 days. [Table 7]

Table 5: Ayurvedic Internal Medications

Sr.	Name of medicine	Matra (Dose)	Time	Anupana	Date	Number of Days
1	<i>Rasaraktapachak Kwath</i>	20 ml	2 times Before the food	<i>Koshnajala</i> (Lukewarm Water)	08/01/2022 to 09/01/2022	02
2	<i>Hingvashtaka Choorna</i>	1 gm	2 times Before the food	<i>Ghruta</i> (Ghee)	08/01/2022 to 09/01/2022	02
3	<i>Gandharva Haritaki Choorna</i>	3 gm	Bed time	<i>Koshnajala</i> (Lukewarm Water)	08/01/2022 to 09/01/2022	02
4	<i>Punarnawa Mandur</i>	250 mg	2 times After the food	<i>Koshnajala</i> (Lukewarm Water)	08/01/2022 to 09/01/2022	02
5	<i>Lohasava</i>	10 ml	2 times After the food	Regular Water	08/01/2022 to 09/01/2022	02
6	<i>Dashmularishta</i>	10 ml	2 times After the food	Regular Water	08/01/2022 to 09/01/2022	02
7	<i>Kharjuradimantha</i>	40 ml	2 times Before the food	<i>Koshnajala</i> (Lukewarm Water)	08/01/2022 to 09/01/2022	02

Sr. No	Date	Procedure
1	10/01/2022 To 13/01/2022	<i>Shodhanartha Snehapan- Dadimadi Ghruta</i> 30 ml
2	14/01/2022 And 15/01/2022	<i>Sarvanga Snehana</i> with <i>Til Taila</i> and <i>Nadi Swedana</i>
3	16/01/2022	<i>Virechana Karma:</i> <i>Purvakarma</i> – <i>Sarvanga Snehana</i> with <i>Til Taila</i> and <i>Nadi Swedana</i> <i>Pradhankarama</i> – <i>Trivrutta Avaleha</i> 30 gm + <i>Abhayadi Modaka</i> 250 mg with <i>Koshnajala</i>

		(Lukewarm Water)
4	17/01/2022 To 19/01/2022	<i>Pashyatkarma – Sansarjanakrama</i> Started by prescribing <i>Peya</i> (preparation of rice and water) and <i>Vilepi</i> (preparation of rice) and so on successively for 3 days. From the 4 th day onward, a diet with the least spices was suggested.

Table 7: Ayurvedic Medication prescribed on discharge for 10 days

Sr.	Name of Medicine	Dose	Time	Anupana
1	<i>Rasaraktapachak Kwath</i>	20 ml	2 times before food	<i>Koshnajala</i> (Lukewarm Water)
2	<i>Hingvashtaka Choorna</i>	1 gm	2 times before food	<i>Ghruta</i> (Ghee)
3	<i>Gandharva Haritaki Choorna</i>	3 gm	Bed Time	<i>Koshnajala</i> (Lukewarm Water)
4	<i>Punarnawa Mandur</i>	250 mg	2 times after food	<i>Koshnajala</i> (Lukewarm Water)
5	<i>Lohasava</i>	10 ml	2 times after food	Regular Water
6	<i>Dashmularishta</i>	10 ml	2 times after food	Regular Water
7	<i>Kharjuradimantha</i>	40 ml	2 times before food	<i>Koshnajala</i> (Lukewarm Water)

Follow-up and Outcomes:

After completion of *ongechana Karma*, the patient felt a significant increase in Hb g% and other hematological investigations. [Table 8] The condition of the patient improved gradually along with the course of the treatment. Symptoms were assessed as per the criteria for assessment [Table 9] and improvement was seen in symptoms, [Table 10] *Panduta* (Pallor) 75%, *Daurbalya* (General weakness) 75%, *Ayasaja Shwasa* (Dyspnoea on exertion) 66.66%, *Pindikodveshtana* (Leg cramps) 50%, *Nidraluta* (Sleepiness) 50%, *Shiroruk* (Headache) 100%, *Bhrama* (Giddiness) 0%, *Sadana* (Fatigue) 66.66%, *Gatra Shoola* (Body ache) 66.66%, *Agnimandya* (Impaired appetite) 66.66%, *Aruchi* (Anorexia) 66.66%. The patient was followed up every 10 days for 3 months, and then, every month for a further 3 months to observe the recurrence of the symptoms. After a follow-up of 6 months, the patient was found free from almost all signs and symptoms of *Pandu Roga* (Dimorphic Anaemia).

Table 8: Haematological investigations before and after treatment

Biochemical Investigations	B.T. 08 th Jan 2022	A.T. 17 th Jan 2022
HB	4.1 gm%	5.2 gm%
WBC	7900/cmm	6200/cmm
Lymphocyte count	1900/cmm	1900/cmm
Neutrophil count	6400/cmm	3800/cmm
Neutrophil	63%	62%
Lymphocytes	24%	30%
Eosinophil	03%	04%
Monocyte	10%	04%
Basophil	00%	00%
Platelet	592000 / cmm	590000 / cmm
HCT	15.5 %	20.6 %
R.B.C. Count	2.64 mil/cmm	3.05 mil/cmm
MCV	58.7 fL	67.5 fL
MCH	15.5 pg	17 pg
MCHC	26.5 gm/dl	25.2 gm/dl

RDW-CV	43.8 %	69.1 %
RDW-SD	21.5 fL	34.6 fL
MPV	7.9 fL	8.9 fL
PDW	9.2 fL	10.7 fL
P-LCR	123	189
ESR	30 mm	20 mm

Table 9: Criteria for assessment of Subjective parameters

Subjective parameters	Observations		
<i>Panduta in Twak</i> (Pallor skin)	Nil	0	Coppery red
	Mild	1	Light red
	Moderate	2	Dark pink
	Severe	3	Light pink
	More severe	4	Pallor
<i>Daurbalya</i> (General weakness)	Nil	0	No weakness
	Mild	1	Occasional weakness
	Moderate	2	Intermittent weakness
	Severe	3	Frequent weakness
	More severe	4	Always weakness
<i>Asasaja Shwasa</i> (Dyspnoea on exertion)	Nil	0	Dyspnea after heavy work and relief soon
	Mild	1	Dyspnea after moderate work but relieved
	Moderate	2	Dyspnea after moderate work but relieved
	Severe	3	Dyspnea after mild work and persists for a long time
	More severe	4	Dyspnoea even at rest
<i>Pindikodweshtana</i> (Leg cramps)	Nil	0	Absent
	Mild	1	Cramps in legs only during heavy work
	Moderate	2	Cramps in legs during moderate work
	Severe	3	Cramps in legs during light work
	More severe	4	Cramps in legs throughout the day even at the rest
<i>Nidraluta</i> (Sleepiness)	Nil	0	Normal sleep 7-8 hrs. Per day
	Mild	1	Sleep up to 9-10 hrs. per day
	Moderate	2	Sleep up to 11-12 hrs. per day
	Severe	3	Sleep up to 13-14 hrs. per day
	More severe	4	Feel sleepy in whole day
<i>Shiroruk</i> (Headache)	Nil	0	No headache
	Mild	1	Headache 1-2 times per week
	Moderate	2	Headache 3-5 times per week
	Severe	3	Headache more than 5 times per week
	More severe	4	Continuous headache during the whole day
<i>Bhrama</i> (Giddiness)	Nil	0	No feeling of giddiness
	Mild	1	Occasionally feels giddiness
	Moderate	2	Intermittently feels giddiness
	Severe	3	Frequently feels giddiness

	More severe	4	Always feels giddiness
Sadana (Fatigue)	Nil	0	No fatigue
	Mild	1	Fatigue in doing hard work
	Moderate	2	Fatigue in doing routing work
	Severe	3	Fatigue in doing mild work
	More severe	4	Fatigue even at rest
Gatra Shoola (Body ache)	Nil	0	No body aches
	Mild	1	Occasionally feels body aches
	Moderate	2	Intermittently feels body aches
	Severe	3	Frequently feels body aches
	More severe	4	Always feels body aches
Agnimandya (Impaired appetite)	Nil	0	Normal appetite
	Mild	1	Impaired appetite occasionally
	Moderate	2	Impaired appetite intermittently
	Severe	3	Impaired appetite often
	More severe	4	Impaired appetite always
Aruchi (Anorexia)	Nil	0	No anorexia
	Mild	1	Occasionally feels anorexia
	Moderate	2	Intermittently feels anorexia
	Severe	3	Frequently feels anorexia
	More severe	4	Always feels anorexia

Table 10: Percentage of improvement in symptoms

Clinical features	B.T. Grade	A.T. Grade	Percentage of relief (%)
Panduta (Pallor)	4	1	75%
Daurbalya (General weakness)	4	1	75%
Ayasaja Shwasa (Dyspnoea on exertion)	3	1	66.66%
Pindikodveshtana (Leg cramps)	2	1	50%
Nidraluta (Sleepiness)	2	1	50%
Shiroruk (Headache)	1	0	100%
Bhrama (Giddiness)	1	1	0%
Sadana (Fatigue)	3	1	66.66%
Gatra Shoola (Body ache)	3	1	66.66%
Agnimandya (Impaired appetite)	3	1	66.66%
Aruchi (Anorexia)	3	1	66.66%

DISCUSSION

Abhyanga (Oleation) balances the *Vata Doshas* and provides *Pushti Prasada* (food for the *dhatus*).^[6] *Swedana* (fomentation) by its, *Ushnaguna* and *Tikshnaguna* can penetrate the (microcirculatory channels) *Srotas* and trigger the sweat glands, causing them to produce more sweat. After dilatation of the microchannels, *Laghu* and *Snigdhadasha* enter the channels and lead them to go towards *Kostha* or ex-

crete them through the skin's micropores as sweat, resulting in *Srotoshodhana*. With the use of *Vamana* or *Virechana* therapy, the *Dosha* brought in *Kostha* is evacuated from the body.^[7] *Virechana* (Therapeutic purgation) is the procedure for expelling the *Doshas* through *Adhomarga*, i.e., *Guda*. This *Karma* is mostly used to reduce *Pitta Doshas*. The *Doshas* or diseased material are expelled down the descending tract due to the predominance of *Prithvi* and *Jala Mahabhutas* in *Virechana* medicines, and their *Prabhava*

(special action) to go downwards (Anus).^[8]

Virechana Karma is described as the effective management of *Pandu Roga* as a *Shodhana* therapy. As it is the most suited therapy for the *Pitta Dosh*, it might be responsible for *Agnivardhana* and evacuation of *Ama*, which is the main culprit of this disease.

Patient Perspective: The patient was happy with the treatment; the quality of his life was improved considerably. He enjoys a normal and healthy life.

CONCLUSION

Pandu Roga is a fairly widespread condition in society, and allopathic iron treatment's side effects, such as constipation and gastrointestinal discomfort, are very common. *Virechana Karma* followed by the *Vishishta Nidana Parivarjana* in the form of food and drugs showed remarkable symptomatic relief in the features of *Pandu Roga*. This observation needs to be studied with a greater number of patients for a better opinion of managing *Pandu Roga* (Dimorphic Anaemia).

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