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Research Article

CLINICAL EVALUATION OF PATHYAA GHrita (SHAMANA SNEHA) WITH VIDANGADI LOHA IN THE MANAGEMENT OF PANDU ROGA

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ABSTRACT

There is a drastic change of lifestyle and food habits in the present era. Individuals are subjected to enormous amount of stress and strain thereby causing a deleterious effect on quality of life. Compounding the stress and strain are the environmental factors and poor quality of nutrition. Because of pollution and indiscriminate use of pesticides the quality of nutrition has deteriorated significantly. It causes Pandu Roga, one of the commonest and most prevalent diseases known to mankind. Vitiated Pitta Pradhana Tridosha vitiates Rakta as Rakta is Pittavargiya and disease like Pandu Roga appears. Pathyaa Ghrita is Tridosahara, especially Pitta-Vatashamaka and Rasayana (rejuvenative) properties. A randomized controlled open clinical trial was conducted with aims to evaluate the efficacy of Pathyaa Ghrita and Vidangadi Loha. Total 17 patients of Pandu Roga of age group between 16 to 60 years having Hb 6gm% to 10gm% were treated with Vidangadi Loha (4 tab 250mg each BDS) along with Pathyaa Ghrita (15ml at morning) for 6 weeks respectively. Assessment was done on the basis of relief in clinical sign-symptoms and hematological parameters. Therapy provided highly significant result on signs and symptoms of Pandu Roga except Nidraluta (excessive sleep).

Keywords: Malnutrition, Pandu Roga, Pathyaa Ghrita, Rasayana, Snehana, Vidangadi Loha.

INTRODUCTION

The present condition of human health around the globe is far from satisfaction. The day-to-day advancement in each and every aspect of living has made the life very fast, hectic and full of stress. The severe change in life style and food habits is super added by the artificial food available in markets as for an example the green vegetables available in the market are grown under high concentration of fertilizers, just to increase the yield of vegetation. The technology has made all the vegetables available throughout the year. Because of this, the percentage of nutritional components (i.e. the carbohydrates, proteins, vitamins and minerals) decreased up to the great extent. All the above conditions contribute to the malnourished status almost in every group of society. According to WHO, it is estimated that prevalence of nutritional anemia in India is 76% in preschool children, 50% in school children, 15-20% in men and 50-80% in women, 70-90% in pregnant women.¹

Many of times it is seen that Rakta gets vitiated by Doshas, mainly by Pitta Dosha as Rakta is Pittavargiya and disease like Pandu appears. In Ayurveda, Pandu is considered as a specific disease with its own pathogenesis and treatment. In modern the nearest correlation of Anemia can be done with Pandu. Anemia is a condition that occurs when the hemoglobin concentration in blood below the low limit of normal range for the age and sex of individuals.

In present study, Pathyaa Ghrita as Shaman Sneha had been selected for following reasons:

It contains, Pathya-Haritaki (*Terminalia chebula*) and Go-ghrita

(Cow's Ghee) moreover both these drugs are Pitta-Anilahara (pacifying Pitta and Vata), Rasayana and also increases Agni and Haritaki is Srotoshodhaka (clean the pathway) property. Acharya Hemadri had defined Shamana Shenha, as administration of this Sneha in different disorders normalises the aggravated Dosha without expelling them and disturbing the function of normal Dosha. So it cures the main cause of disease.

Aims and objectives

- To study the etio-pathogenesis, symptomatology of the Pandu Roga according to Ayurvedic classics as well as modern medical science.
- To study the effectiveness of Pathyaa Ghrita and Vidangadi Loha on Pandu Roga.

MATERIAL AND METHODS

Selection of Patients

There were 17 patients attended the O.P.D. of Govt. Akhandanad Ayurved College & Hospital, Ahmedabad and Govt. Maniben Ayurved hospital, Ahmedabad who were fulfilling the criteria of the disease were selected for clinical study irrespective of their age, sex, religion etc. for the present study. The study has been approved by Institutional Ethics Committee and is registered to CTRI (CTRI/2015/09/006200) and consent form each patient was obtained before starting the course of treatment.

Inclusion criteria

- Patient having classical symptoms of Pandu roga were selected for the thesis work.
- Patient having Hb 6gm% to 10 gm% were selected.

- Only these patient having low level of haemoglobin, RBC count, PCV, MCV, MCH, MCHC, TLC, Reticulocyte count were selected for the study.
- Patients having Pandu Roga without complication
- Patients age limit 16 to 60 year.

Exclusion Criteria

- Congenital Anemia likes Thalassemia, Sick cell Anemia, Leukemia, Aplastic Anemia, Anemia due to bleeding piles, Menorrhagia.
- Patient age <16 to >60 years.
- Patient having any other major complicated disease like Cardiac disease, Diabetes Mellitus, etc. were excluded.
- Pregnant women were excluded.
- Patient suffering with Asadhya and Arishtalakshana described in Ayurvedic classics.

Diagnostic criteria

Diagnosis will be done on basis of

- Clinical signs and symptoms mentioned in Ayurvedic classics as well as modern medicine texts.
- Pathological laboratory investigation as.
 - Blood:-
 - ☞ Haemoglobin estimation, Total RBC count, P.C.V (Packed Cell Volume), MCV, MCH, MCHC, Total leucocytes count, ESR.
 - ☞ Routine Stool examination and other relevant pathological examination will be done as per necessary. Essential investigations will be carried out before and after treatment

Management of the patients

There were 17 patients treated with “Pathyaa Ghrita and Vidangadi Loha

Pathyaa Ghrita² (Table 1)

Dose: 15 ml/ day at morning (Kshudha Kala)

Anupan (adjuvant): Luke warm water.

Duration: 6 weeks.

Vidangadi Loha³ (Table 2)

Bhavana Dravya: Gomutra

Dose 4 Vati each of 250 mg two times a day after the meal

Anupan water.

Duration 6 weeks

Diet

Patient was allowed to follow Pathya-Apathya mentioned for Pandu. Ghrita was prepared as per the classical method of manufacturing Ghrita Kalpana and Vati was prepared as per the classical method of manufacturing Vati Kalpana mentioned Sharangdher Samhita. Both were prepared by Govt. Ayurvedic Pharmacy, Rajpipala.

Criteria for assessment

Assessment of the result was made on the basis of improvement in clinical findings as well as laboratory investigations, which were repeated after the completion of treatment also.

Improvement in the clinical signs and symptoms were assessed by adopting the following scoring method.

Panduta (Pallor)

The score was decided on the basis of Panduta present in Twaka (Skin), Nakha (nail), Netravatma (conjunctiva), Jihva (tongue) and

Hastapadotala (palmar and footer surface)

Absent	0
In any two of these	1
In any three of these	2
In any four of these	3
In any five of these	4

Daurbalya (general weakness)

No Daurbalya	0
Not able to perform strenuous activity.	1
Not able to perform moderate activity.	2
Cannot perform moderate activity but can perform mild activity without any difficulty.	3
Even mild activities cannot be performed.	4

Rukshata (dryness)

No line on scrubbing with nail	0
Faint line on scrubbing by nail	1
Lining & even words can be written by a nil	2
Excessive Rukshata leading to Kandu	3
Dryness/roughness and crisscross visible cracking of skin.	4

Aayasen Shwasa (dyspnea)

Not present	0
After heavy work, relieved soon & tolerate	1
After moderate work but relieved later & up to tolerance	2
After little work but relieved later & up to tolerance	3
After little work but relieved later & beyond tolerance	4
Shwasa even in resting condition	5

Pindiko-Dweshtana (leg cramps)

Absent	0
Pandiko-Dweshtana only during heavy-works like exercise, running, climbing, upstairs, lifting heavy objects etc.	1
Pindiko-Dweshtana during normal Routine light works like walking etc	2
Pindiko- Dwestana continuously Throughout day even during resting condition	3

Nidraluta (excessive sleep)

Normal sleep 6-7 h per day	0
Sleep up to 8 h/day with AngaGaurava	1
Sleep up to 8 h/day with AngaGaurava and Jrimbha	2
Sleep up to 10 h/day with Tandra	3
Sleep more than 10 h/day with Tandra and Klama	4

Gaurav (heaviness)

No heaviness	0
Occasionally feeling of heaviness for sometimes in hands and feet	1
Feeling of heaviness for sometimes in hands and feet not affecting activities of daily living	2
Daily feeling of heaviness over body, which leads to Akarmanyata	3
Most part of the body for long duration	4
All body for most part of the day	5

Parshvashiroruka (headache)

No pain	0
Occasional pain 1 to 22 time/ week	1
Pain 3 to 5 times / week	2
Pain more than 5 times / week	3
Continuous pain	4

Aasya-Vairasya (anorexia)

Normal taste of mouth	0
Occasional sensation of unpleasant taste	1
Continuous sensation of unpleasant taste but vanishes after eating something	2
Continuous mild sensation of unpleasant taste which persists even after eating	3
Severe unpleasant taste throughout the day	4

Kopana (Anger)

No anger even for reasonable cause	0
Gets angry only for reasonable cause	1
Gets angry even for unreasonable cause	2
Highly irritable for no cause, uncontrollable anger with body gestures	3

Bharma (giddiness)

No Reeling of head/ Bhrama	0
Sometimes feeling of reeling head/ Bhrama	1
Feeling of reeling head/ Bhrama < 3 times a day	2
Feeling of reeling head/ Bhrama > 3 times a day	3
Frequently feeling of reeling head change of posture causes the severe problem	4

Jwara (fever)

No	0
Occasional	1
Daily once	2
Constant	3

Sadana (fatigue)

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

Trishana (thirst)

Normal feeling of thirst	0
Frequent feeling of thirst, but quench with normal amount of liquids	1
Satisfactory quench after increased intake of fluids but no awakening during nights	2
Satisfactory quench after increased intake of fluids with regular awakening during nights	3
No quench after heavy intake of fluids	4

The Students paired 't' test is applied to the statistical data for evaluating the difference in the BT & AT scores of subjective parameters

The obtained results were interpreted as –

Non-significant	p > 0.05
Significant	p < 0.05
Highly significant	p < 0.001

OBSERVATIONS AND RESULT

Maximum patients i.e. 47.06% were belong to 16 – 30 years age group, 100% were female, Hindu 70.59%, 52.94% Married, 64.71% Housewives, 76.47% from Middle class. Elaborated

dietetic disclosed that maximum number (70.59%) patients were taking vegetarian diet, Amla Rasa Sevana (use of sour taste)(75.90%), Lavana Rasa Sevana (use of salty taste) (58.82%) and having Avara Kshudha in 76.47%, Mandagni in 58.82%. Analysis of the Dosha's involvement shows that 88.24% patients taking Pitaja Aaharaja Nidana, 76.47% taking Pitaja Viharaja Nidana, most of patients were found with Vataja Pandu and 100% Rasa Dushya, 100 % Rasavaha Srotasa involvement.

After completion of therapy, highly significant results in all the signs and symptoms except Nidraluta (Significant Result) (Table 3). On hematological value, highly significant results in all parameters except TLC and MCHC (Insignificant) (Table 4) Overall effect of therapy showed 52.94 % Marked improvement and 23.53% Complete remission and Improvement in patients (Table 5).

DISCUSSION

Pandu Roga is more appear in 16-30 years younger age group patients who are prone to mental stress, excessive exercises, irregularity in diet and improper Vihara (Atapa Sevana, Ratrijagarana etc.) due to their professional responsibilities. The prevalence of Pandu was found to be more in females (100%). This can be due to insufficient dietary habits, social negligence, unawareness and menstrual cause. Maximum patients were affected with Chinta (Anxiety), i.e. 94.12%, 47.06% were affected with Krodha and "Chintyanam Cha Atichintanat" is a cause of Rasavaha Srotasdushti⁴. Maximum number of patients was vegetarian and like Amala Rasa followed by Lavana and Katu Rasa. According to classics, excessive use these Rasa causes Pitta Prakopa (vitiation of Pitta)⁵. Maximum numbers of patients were having Mandagni. The hampered Agni ultimately leads to Agnimandya, which leads to Dhatvagnimandya.

In Pandu, Pitta is a predominant Dosha and in Pathyaa Ghrita, Go- Ghrita has Sheeta Virya properties and has been described for treatment of Pitta Dosha also. Madhura Rasa helps to decrease vitiated Pitta. Ghrita is Pitta-Anilhara, Rasavardhaka and Deepana properties⁶ and it is considered as best Snehana Dravya who increase the Agni⁷. Pathyaa Ghrita contains Haritaki and Go- Ghrita, both having Rasayana property which improves circulation of Rasa and Rakta Dhatu in body. Haritaki is having Deepana, Pachana, Balaprada and Pandu rogaghna properties⁸.

Majority of drugs of Vidangadi Loha have Katu Rasa, Laghu, Ruksha, Tikshna, Ushna Guna which have Deepan Pachana, Shodhana property and it clears obstructed Srotasa. Daruharidra, Pippali and Maricha are having Deepana, Yakrit Uttejaka, Pittasaraka properties. Yakrita is a Moola of Raktavaha Srotasa in Pandu Alparaktata is found. Yakrituttejaka property initiates Yakrita to make good quantity and quality of Rakta Dhatu⁹. Pippali having Deepana, Rasayan, and Panduroganuta properties¹⁰. Vidanga have Krimighna property which checks intestinal worm infestation. Vidanga is Tikshana, Ushana, Agni Vardhaka, Krimihara. Iron is the best Rasayana¹¹. These all properties assist in Samprapti Vighatana of Pandu Roga.

By combine action of all these drugs improves Jatharagni as well as Dhatvagni. After this quality and quantity of Rasa and Rakta Dhatu improves. Due to Srotovishodhana property Srotosanga is decreased and Dhatu again nourish all parts of body.

Table 1: Contents of Pathyaa Ghrita

Drug	Latin Name	Prayajyaanga	Part
Haritaki	<i>Terminalia chebula</i>	Phala	4 Parts
		PhalaVruta	1/8 Part
Go-Ghrita			1 part

Table 2: Contents of Vidangadi Loha

Sr. no	Drug	Latin Name	Prayojaya Anga	Part
1.	Vidanga	<i>Embelia ribes</i>	Phala	1
2.	Musta	<i>Cyperus rotundus</i>	Kanda	1
3.	Amalaki	<i>Emblica officinalis</i>	Phala	1
4.	Bibhitaka	<i>Terminalia bellirica</i>	Phala	1
5.	Haritaki	<i>Terminalia chebula</i>	Phala	1
6.	Shunthi	<i>Zingiber officinale</i>	Kanda	1
7.	Maricha	<i>Piper nigrum</i>	Phala	1
8.	Pippli	<i>Piper longum</i>	Phala	1
9.	Pippalimula	<i>Piper longum</i>	Mula	1
10.	Chavya	<i>Piper retrofractum</i>	Mula	1
11.	Chitraka	<i>Plumbago zeylanica</i>	Mulatwaka	1
12.	Devdaru	<i>Cedrus deodara</i>	Kandasara	1
13.	Lohabhasma	Ferrosoferric oxide	-	12

Table 3: Effect on cardinal features in Pathyaa Ghrita with Vidangadi Loha

Features	N	Mean		% Relief	X	S.D.±	S.E.±	't'	P
		BT	AT						
Panduta	17	2.0	0.82	62.75	1.18	0.53	0.13	9.18	<0.001
Daurbalya	17	2.18	0.94	56.86	1.24	0.44	0.11	11.65	<0.001
Rukshata	13	1.69	0.85	51.28	0.85	0.55	0.15	5.50	<0.001
Ayasan Swasa	15	2.13	0.87	62.87	1.27	0.46	0.12	10.72	<0.001
Pindikodweshtana	16	1.44	0.50	73.96	0.94	0.25	0.06	15.00	<0.001
Nidraluta	07	1.43	0.43	71.43	1.00	0.58	0.22	4.58	0.004
Gaurava	09	1.44	0.56	88.67	0.89	0.33	0.11	8.00	<0.001
Parshvashiro Ruka	17	1.76	0.71	64.71	1.06	0.24	0.06	18.00	<0.001
Aasya Vairasya	13	1.69	0.85	46.15	0.85	0.55	0.15	5.5	<0.001
Kopana	13	2.00	0.69	67.95	1.31	0.48	0.13	9.81	<0.001
Bhrama	14	1.64	0.50	75.00	1.14	0.36	0.10	11.78	<0.001
Jwara	06	1.50	0.50	75.00	1.00	0.00	0.00	(+nt)	<0.001
Sadana	15	1.93	0.80	60.00	1.13	0.35	0.09	12.47	<0.001
Trishna	07	1.57	0.57	71.43	1.00	0.00	0.00	(+nt)	<0.001

BT: Before treatment, AT: After treatment

Table 4: Effect of therapy on Hematological Investigation

Lab. Findings (n=17)	Mean score		% of Relief	X	S.D.±	S.E.±	't'	P
	BT	AT						
Hb g/dl	8.96	10.18	13.95	1.22	1.09	0.26	4.62	<0.001
RBC($10^6/\mu\text{l}$)	3.77	4.04	7.38	0.27	0.27	0.07	4.23	<0.001
TLC($/\mu\text{l}$)	7376.47	6823.53	4.46	552.94	1495.56	362.73	1.52	0.147
PCV (%)	28.90	32.77	14.21	3.87	2.51	0.61	6.37	<0.001
MCV(fl)	76.60	81.82	7.47	5.22	4.60	1.12	4.68	<0.001
MCH(pg)	23.92	25.53	6.93	1.61	1.65	0.40	4.01	0.001
MCHC(g/dL)	30.95	31.32	1.08	0.37	1.73	0.42	0.88	0.394
ESR(mm)	35.71	20.12	41.76	15.59	8.54	2.07	7.52	<0.001

BT: Before treatment, AT: After treatment, Hb%: Hemoglobin %, RBC: Red blood cells, PCV: Packed cell volume, MCV: Mean corpuscular volume; MCH: Mean corpuscular hemoglobin, MCHC: Mean corpuscular hemoglobin concentration, ESR: Erythrocyte sedimentation rate

Table 5: Overall effect of therapy in 17 patients of Pandu Roga

Percentage of Relief	Effects	Group A	
		No. of Patients	%
76-100%	Complete remission	04	23.53
51% - 75%	Marked improvement	09	52.94
26% - 50%	Improved	04	23.53
0% - 25%	Mild improvement	00	00
0%	No improvement	00	00

CONCLUSION

Pandu is not Anaemia but Anaemia comes under Pandu so many disease comes under Pandu like Anaemia, Jaundice etc. According to Ayurveda Blood is mixed form of Rasa and Rakta Dhatu and in Anaemia percentage of Hb or Number of RBCs is decreased in Blood. But many symptoms of Pandu and Anaemia are common like Panduta-pallor, Daurbalya –Tiredness, Nidraluta-Lethargy etc. Agni is the prime force for the sustenance of all biological systems/living being. There is an Agni in Rasa Dhatu, when it get vitiated with the Dosha mainly by Vata and Kapha, Dhatwagnimandya takes place at the level of Rasa Dhatu and Rakta Dhatu is not fully formed. Most of the drugs of both medicines having Dipana, Pachana and Rasayana properties so they improves digestive power and formed Rakta Dhatu in qualitative and quantitative.

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