



**ORIGINAL RESEARCH PAPER**

**Ayurveda**

**REVIEW ARTICLE: EVALUATION OF EFFICACY OF “TRIPHALA KWATH WITH GOGHRITA AND SITA” IN VATAJ PANDU.**

**KEY WORDS:** Vataj Pandu, Anemia, Triphala Kwath, Goghrita and Sita

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**ABSTRACT**

Anemia is defined as a haemoglobin concentration in blood below the lower limit of normal range of individual. Asia has the highest rates of anemia in the world. Nutritional iron deficiency is the most common cause of anemia in India . Blood is the very essence of life and nature has devised a very ingenious method to continuously supply blood to every part of the body, in fact every cell of the body. Oxygen along with other nutrients is supplied continuously by the circulating blood, with the heart at the center of this system. Oxygen is required for all metabolic functions of the cells and production of energy for these activities. The iron deficiency anemia can be correlate with Pandu Roga in Ayurveda. The disease pandu is explained in almost all Ayurvedic classics with its etiopathogenesis and treatment elaborately. Being the most predominant and common sign Panduta, the disease is termed as 'Pandu Roga'. As we know the side effects of oral allopathic iron preparations are very common, therefore to get a better alternative I used ayurvedic preparation i.e. Triphala Kwath with Goghrita-Sita for my study. The study design set for the present study is “**Randomized open labeled controlled study**”. The study was done in two groups viz. Group A (Trial Group) & Group B (Control Group). Study was conducted on 60 diagnosed patients of *Vataj Pandu* having classical sign and symptoms mentioned in Ayurvedic samhita. 30 patients in Group A had given *Triphala Kwath with Goghrita (Butyrum departum) & sita (Sugar)* & 30 patients in Group B had given *Mandoor Vajra Vatak with Takra*. Observations were analyzed with the help of Paired-t Test.

**INTRODUCTION:**

The human quest for health and longevity paved the way for the birth of Science of life, which is the science of medicines as well; to keep the health of the healthy and restore the health for the unhealthy. The pioneer of all Medical systems, Ayurveda is based on its profound theories on the structural and functional aspects of wellness and illness.

The pledged purpose of Ayurveda as a medical system is to ensure a healthier and longer life to the humanity. The time is ripe enough to seriously take up productive researches in such disorders where Ayurveda can offer a better hand than any other medical system.

*Pandu* is a disease characterized by pallor of body which strikingly resembles with “Anaemia” of modern science. In anaemia there is reduction in number of Rbcs per cumm of Blood and decreased Hb%.

*Pandu Roga* is one amongst most common ailments observed in the mankind. The disease *pandu* is explained in almost all Ayurvedic classics with its etiopathogenesis and treatment elaborately. Percentage of *Pandu Roga* in India is also very high. Being the most predominant and common sign *Panduta*, the disease is termed as '*Pandu Roga*'.

Many *Shamana* (Alleviating) therapy (single and compound drugs) as well as *Shodhana* (Removal of the doshas from the body) therapy has been tried in *Panduroga* by various research scholars. The result of the treatment was not very significant. *Triphala kwatha with Goghrita-Sita* is one of the important medicines used in *Panduroga* as mentioned in Ayurvedic classics. Ingredients in this have *Rasayana (Rejuvenation)*, *Deepana (Stimulating digestion)*, *Pachana, (Digestion)*, *Vatanulomana (Forcing the wind in right direction)* *Raktavardhaka ( Causing increase in blood)* etc properties. So, the present study has been carried out to see the efficacy of *Triphla kwath with Goghrita (Butyrum departum) & Sita (Sugar)* & comparing its results with a well established, researched & standardized drug *Mandur Vajra Vatak with Takra*.

**MATERIALS AND METHODS:**

Following material and methods were adopted for conducting the present study.

**INCLUSION CRITERIA:**

- 1) Patients having textual symptoms of *Vataj Pandu*.
- 2) Sex: Male / Female.
- 3) Age: 20 to 60 Years.
- 4) Patients having Hb% -  $\geq 5\text{gm/dl}$  &  $\leq 11\text{gm/dl}$

**EXCLUSION CRITERIA:**

- 1) Patients having Hepato toxicity, Ototoxicity and other complications.
- 2) Tuberculosis.
- 3) Psychologically disturbed patients.
- 4) HIV patients
- 5) Extra Pulmonary Kochs diseases like Pleural effusion, Kochs abdomen Etc.

**Study Plan:**

- 1) **Level of study:** The study had been carried out at OPD level.
- 2) **Study Design:** Study Type – Randomized, Open labeled, Controlled study

**Purpose –**Treatment

**Control Group –**Yes

**Number of group –**Two

**Number of Patients in each group –**30 in each group

**Treatment Schedule for Group A (Trial Group):**

- i) Drug** : *Triphala Kwath*
- ii) Dose** : *Kwath –40 ml*
- iii) Prakshep Dravya** : 1) *Goghrita-10gm* 2) *Sharkara-5gm*
- iv) Kala** : *Pratah -Abhakta (At Morning on empty stomach) & Sayam (At Evening Before Dinner)*
- v) Duration of Tria** : 28 days
- vi) Route of Administration:** Oral
- vii) Follow up** : 7<sup>th</sup> day, 14<sup>th</sup> day, 21<sup>st</sup> day, 28<sup>th</sup> day & 29<sup>th</sup> day

Basic ingredients of Trial drug are listed in table as below:

Dravya	Rasa	Guna	Veerya	Vipaka	Dosha Karma
Haritaki	Lavanvarjita Kashayapradhan Pancha rasatmaka	Laghu, Ruksha	Ushna	Madhura	Tridoshahara vishesh Pittahara Rasayana, Pandughna

Bibhitak	Kashaya	Ruksha, Laghu	Ushna	Madhura	Tridoshahara vishesh Vatahara Deepan, Pachan
Amalaki	Lavan varjita Amlapradhan Pancharasatmaka	Ruksha, Guru, Sheeta	Sheeta	Madhura	Tridoshahara vishesh Pittahara, Anulomak Pandughna, Medhya
Goghrita	Madhura	Guru, Snigdha	Sheeta	Madhura	Tridoshahara especially Pitta- Vatashamaka, Jeevaniya
Sharkara	Madhura	Guru, Snigdha	Sheeta	Madhura	Pitta-Vatashamak, Raktashodhaka

**Treatment Schedule for Group B (Control Group):**

- i) Drug** : Mandur Vajra Vatak
- ii) Dose** : 2 Tablets (each 500 mg)
- iii) Anupan** : Takra
- iv) Kala** : Pratah -Abhakta (At Morning on empty stomach) & Sayam (At Evening Before Dinner)
- v) Duration of Trial** : 28 days
- vi) Route of Administration** : Oral
- vii) Follow up** : 7<sup>th</sup> day, 14<sup>th</sup> day, 21<sup>th</sup> day, 28<sup>th</sup> day & 29<sup>th</sup> day

**Clinical study:**

The study design set for the present study is "Randomised open labeled controlled study".

Patients having Hb% between 5-11 gm% & having lakshanas of Vataj Pandu mentioned in ayurvedic classical texts were selected for the study. Total 60 patients were selected. The study completed in two groups.

**GROUP A** (Trial group): 30 patients had given *Triphala Kwath with Goghrita (Butyrum departum) & Sita (Sugar)*.

**GROUP B** (Control group): 30 patients had given *Mandoor Vajra Vatak with Takra*.

Initial assessment was done on 0<sup>th</sup> day after selection of patient as per inclusion & exclusion criteria and then follow up was taken after every 7<sup>th</sup> day for the assessment of lakshanas of Vataj Pandu. These lakshanas were assessed using V.A.S (Visual Analogue Scale). The investigations like Haemogram & Sr. Proteins were done on 1<sup>st</sup> day prior to inclusion & repeated after completion of treatment schedule i.e. on 29<sup>th</sup> day.

**CRITERIA OF ASSESSMENT:-**

**1) Clinical Parameters:** - Following chief complaints were assessed using V.A.S (Visual Analogue Scale) to determine their order of severity:

- a) *Krushnapandutwa* (Blackish discolouration of skin)
- b) *Rukshatwa* (Dryness of skin)
- c) *Arunangata* (Reddish Brown discoloration of skin)
- d) *Angamarda* (Body ache)
- e) *Ruja* (Pain)
- f) *Toda* (Sharp pain)
- g) *Kampa* (Tremor/Shaking)
- h) *Parshwashoola* (Shooting pain in the region of ribs)
- i) *Shirashoola* (Headache)
- j) *Varchashosha* (Dryness of stool)
- k) *Asyavairasya* (Distaste in mouth)
- l) *Anaha* (Constipation)
- m) *Shopha* (Oedema)
- n) *Balakshaya* (Weakness)

**Visual Analog Scale (VAS)** in 100 mm point scale.

0 mm	_____	100 mm
Not any	0 mm	
Not very severe	25 mm	

Quite severe	50 mm
Severe	75 mm
Very severe	100

**2) Investigations:-**

Following investigations were done on 1<sup>st</sup> day prior to inclusion & repeated after completion of treatment schedule i.e. on 29<sup>th</sup> day.

1. Haemogram
2. Serum Protein

**Observation and Results :**

**1) Age wise distribution of patients**

Age(yrs)	Group A	Group B	Total (%)
21-30	3	10	13 (21.67%)
31-40	7	4	11 (18.33%)
41-50	14	8	22 (36.67%)
51-60	6	8	14 (23.33%)
Total	30	30	60 (100%)

**2) Sex wise distribution of patients**

Sex	Group A	Group B	Total (%)
Male	7	6	13 (21.67%)
Female	23	24	47 (78.33%)
Total	30	30	60 (100%)

**3) Occupation wise distribution of patients**

Occupation	Group A	Group B	Total(%)
Student	0	2	2 (3.33%)
Housewife	16	10	26 (43.33%)
Worker	7	8	15 (25%)
Service	7	10	17 (28.33%)
Total	30	30	60 (100%)

**4) Diet wise distribution of patients**

Diet	Group A	Group B	Total (%)
Vegetarian	7	8	15 (25%)
Mixed	23	22	45 (75%)
Total	30	30	60 (100%)

**5) Prakruti wise distribution of patients**

Prakruti	Group A	Group B	Total (%)
VP	18	6	24 (40%)
VK	5	17	22 (36.67%)
PV	3	0	3 (5%)
PK	0	0	0 (0%)
KV	4	4	8 (13.33%)
KP	0	3	3 (5%)

**6) Agni wise distribution of patients**

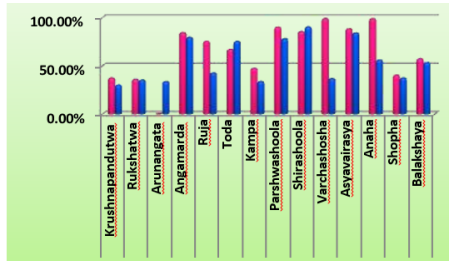
Agni	Group A	Group B	Total (%)
Visham	10	3	13 (21.67%)
Tikshna	0	0	0 (0%)
Manda	20	27	47 (78.33%)
Sama	0	0	0 (0%)
Total	30	30	60 (100%)

**Comparative Statistical Study Of Two Groups According To Symptoms:**

No	Criteria	Gr		Mean	S.D.	S.E.	t value	P value	Remark
1	<i>Krushnapandutwa</i>	A	B.T.	22.5	28.88	5.2727	3.340	=0.0023	Significant
			A.T.	14.1667	21.4590	3.9179			
		B	B.T.	30.8333	36.3670	6.6397	4.097	=0.0003	
			A.T.	21.6667	26.0415	4.7545			
2	<i>Rukshatwa</i>	A	B.T.	35	30.5129	5.5709	5.385	< 0.0001	Highly Significant
			A.T.	22.5	21.1216	3.8563			
		B	B.T.	52.5	33.7013	6.1530	5.809	< 0.0001	
			A.T.	34.1667	27.4516	5.0120			
3	<i>Arunangata</i>	A	B.T.	2.5	13.6931	2.5	1.000	=0.3256	Not Significant
			A.T.	0	0	0			
		B	B.T.	7.5	22.8846	4.1781	1.795	=0.0831	
			A.T.	5	15.2564	2.7854			
4	<i>Angamarda</i>	A	B.T.	41.6667	31.7135	5.7901	6.960	< 0.0001	Highly Significant
			A.T.	6.6667	11.2444	2.0529			
		B	B.T.	64.1667	29.8584	5.4514	9.608	< 0.0001	
			A.T.	13.3333	19.4020	3.5423			
5	<i>Ruja</i>	A	B.T.	13.3333	27.6472	5.0477	2.449	=0.0206	Significant
			A.T.	3.3333	8.6436	1.5781			
		B	B.T.	21.6667	33.9455	6.1976	2.626	=0.0137	
			A.T.	12.5	23.4429	4.2801			
6	<i>Toda</i>	A	B.T.	2.5	13.6931	2.5	1.000	=0.3256	Not Significant
			A.T.	0.8333	4.5644	0.8333			
		B	B.T.	10	25.9309	4.7343	2.068	=0.0476	
			A.T.	2.5	7.6282	1.3927			
7	<i>Kampa</i>	A	B.T.	14.1667	24.2858	4.4340	2.283	=0.0299	Significant
			A.T.	7.5	14.8991	2.7202			
		B	B.T.	7.5	22.8846	4.1781	1.361	=0.1841	
			A.T.	5	16.6091	3.0324			
8	<i>Parshwashoola</i>	A	B.T.	24.1667	31.8153	5.8087	4.176	=0.0002	Significant
			A.T.	2.5	7.6282	1.3927			
		B	B.T.	15	30.5129	5.5709	2.536	=0.0169	
			A.T.	3.3333	10.8543	1.9817			
9	<i>Shirashoola</i>	A	B.T.	39.1667	26.0001	4.7469	7.616	<0.0001	Highly Significant
			A.T.	5.8333	10.7546	1.9635			
		B	B.T.	33.3333	36.7502	6.7096	4.781	<0.0001	
			A.T.	3.3333	10.8543	1.9817			
10	<i>Varchashosha</i>	A	B.T.	67.5	22.8846	4.1781	15.837	<0.0001	Highly Significant
			A.T.	0.83333	4.5644	0.8333			
		B	B.T.	9.1667	24.1076	4.4014	1.278	=0.2113	
			A.T.	5.8333	18.1983	3.3225			
11	<i>Asyavairasya</i>	A	B.T.	27.5	26.5470	4.8468	5.298	<0.0001	Highly Significant
			A.T.	3.3333	8.6436	1.5781			
		B	B.T.	40.8333	36.8380	6.7257	5.761	<0.0001	
			A.T.	6.6667	13.0208	2.3773			

**Comparative Analysis Between Groups**

No.	Symptoms	Mean of Reduction		Percentage of Relief	
		Group A	Group B	Group A	Group B
1	<i>Krushnapandutwa</i>	8.3333	9.1666	37.03 %	29.72 %
2	<i>Rukshatwa</i>	12.5	18.3333	35.71 %	34.92 %
3	<i>Arunangata</i>	2.5	2.5	0 %	33.33 %
4	<i>Angamarda</i>	35	50.8334	83.99 %	79.22 %
5	<i>Ruja</i>	10	9.1667	75 %	42.30 %
6	<i>Toda</i>	1.6667	7.5	66.66 %	75 %
7	<i>Kampa</i>	6.6667	2.5	47.05 %	33.33 %
8	<i>Parshwashoola</i>	21.6667	11.6667	89.65 %	77.77 %
9	<i>Shirashoola</i>	33.3334	30	85.10 %	90 %
10	<i>Varchashosha</i>	66.6667	3.3334	98.76 %	36.36 %
11	<i>Asyavairasya</i>	24.1667	34.1666	87.87 %	83.67 %
12	<i>Anaha</i>	58.3334	4.1667	98.59 %	55.55 %
13	<i>Shopha</i>	1.6667	8.3333	40 %	37.03 %
14	<i>Balakshaya</i>	13.3333	22.5	57.14 %	52.94 %



**DISCUSSION**

**1) Discussion according to symptoms & criteria :**

As we see the observational data, out of 30 patients in Trial Group, the symptoms like *Varchashosha* (Dryness of stool) & *Anaha* (Constipation) were seen in 93.33% & 86.66% of patients respectively, while 73.33% & 66.67% of patients had *Shirashoola* (Headache) & *Angamarda* (Body ache) respectively. 60% of patients shown the symptoms like *Rukshatwa* (Dryness of skin) while 53.33% of patients had *Asyavairasya* (Distaste in mouth), *Balakshaya* (Weakness) & *Krushnapandutwa* (Blackish discolouration) were seen in 40% of patients. *Ruja* (Pain) & *Kampa* (Tremor/Shaking) was seen in near about 20 to 26% of patients. So from the above data we can say that, the symptoms like *varchashosha* (Dryness of stool), *Anaha* (Constipation), *Shirashoola* (Headache), *Angamarda* (Body ache), *Rukshatwa* (Dryness of skin), *Balakshaya* (Weakness), *Asyavairasya* (Distaste in mouth) are the main & commonly found symptoms of *Vataj Pandu* in Trial Group.

Regarding the Trial Drug, *Triphala* which is *Rasayan*, *Vayasthapan* (Prevent aging), *Virechanopag* (Purgative), *Deepan* (Stimulating digestion), *Pachan* (Digestive) *Tridosahara* (Alleviating three humours of the body) specially acts on *Dhatu shithilata* (Flaccidity of the Dhatus). So metabolism improves, ultimately leads to proper *Dhatu Poshana* (Nourishment of the Dhatus).

- The result after treatment in Trial Group are as follows - *Krushnapandutwa* (Blackish discolouration): According to statistics, Mean of reduction in *Krushnapandutwa* was 8.3333 in Gr.A & 9.1666 in Gr.B. Percentage of relief was 37.03% in Gr.A & 29.72% in Gr.B.
- Rukshatwa* (Dryness of skin): According to statistics, Mean of reduction in *Rukshatwa* was 12.5 in Gr. A & 18.3333 in Gr.B. Percentage of relief was 35.71% in Gr. A & 34.92% in Gr. B.
- Arunangata* (Reddish Brown discoloration): According to statistics, Mean of reduction in *Arunangata* was 2.5 in Gr. A & 2.5 in Gr. B. Percentage of relief was 0% in Gr. A & 33.33% in Gr. B.
- Angamarda* (Body ache): According to statistics, Mean of reduction in *Angamarda* was 35 in Gr. A & 50.8334 in Gr. B. Percentage of relief was 83.99% in Gr. A & 79.22% in Gr. B.
- Ruja* (Pain): According to statistics, Mean of reduction in *Ruja* was 10 in Gr. A & 9.1667 in Gr. B. Percentage of relief was 75% in Gr. A & 42.30% in Gr. B.
- Toda* (Sharp pain): According to statistics, Mean of reduction in *Toda* was 1.6667 in Gr. A & 7.5 in Gr.B. Percentage of relief was 66.66% in Gr. A & 75% in Gr. B.
- Kampa* (Tremor/Shaking): According to statistics, Mean of reduction in *Kampa* was 6.6667 in Gr. A & 2.5 in Gr. B. Percentage of relief was 47.05% in Gr. A & 33.33% in Gr. B.
- Parshwashoola* (Shooting pain in the region of ribs): According to statistics, Mean of reduction in *Parshwashoola* was 21.6667 in Gr.A & 11.6667 in Gr. B. Percentage of relief was 89.65% in Gr. A & 77.77% in Gr. B.
- Shirashoola* (Headache): According to statistics, Mean of reduction in *Shirashoola* was 33.3334 in Gr. A & 30 in Gr. B. Percentage of relief was 85.10% in Gr. A & 90% in Gr. B.
- Varchashosha* (Dryness of stool): According to statistics, Mean of reduction in *Varchashosha* was 66.6667 in Gr. A

& 3.3334 in Gr. B. Percentage of relief was 98.76% in Gr. A & 36.36% in Gr. B.

- Asyavairasya* (Distaste in mouth): According to statistics, Mean of reduction in *Asyavairasya* was 24.1667 in Gr. A & 34.1666 in Gr. B. Percentage of relief was 87.87% in Gr. A & 83.67% in Gr. B.
- Anaha* (Constipation): According to statistics, Mean of reduction in *Anaha* was 58.3334 in Gr. A & 4.1667 in Gr. B. Percentage of relief was 98.59% in Gr. A & 55.55% in Gr. B.
- Shopha* (Oedema): According to statistics, Mean of reduction in *Shopha* was 1.6667 in Gr. A & 8.3333 in Gr. B. Percentage of relief was 40% in Gr. A & 37.03% in Gr. B.
- Balakshaya* (Weakness): According to statistics, Mean of reduction in *Balakshaya* was 13.3333 in Gr. A & 22.5 in Gr. B. Percentage of relief was 57.14% in Gr. A & % in Gr. B.
- This shows decrease in the symptoms like *Varchashosha*, *Anaha*, *Parshwashoola*, *Asyavairasya*, *Shirashoola*, *Angamarda* was very high followed by *Ruja*, *Toda*, *Balakshaya* were decreased moderately.
- Kampa* & *Shopha* decreased in middle range while *Krushnapandutwa* & *Rukshatwa* decreased to very less extent.

**2) Discussion according to data of Investigations :**

**Comparative study of Hb% level between two groups**

	(Mean±SD)	SE	Mean difference	T value	p value
Group A	0.5600 ± 0.4643	0.08477	0.006667	0.0652	=0.9482
Group B	0.5667 ± 0.3133	0.5720		Df=58	

**Comparative study of Total Sr. Protein level between two groups**

	(Mean±SD)	SE	Mean difference	T value	p value
Group A	0.3067 ± 0.3542	0.06467	0.05000	0.668	=0.5067
Group B	0.2567 ± 0.2063	0.03766		Df=58	

- From the investigative data of Trial Group, increase in Hb% was noted in range 0.1 – 2 gm. Hb% increased in the range of 1-1.0gm in 86.66% patients while only 10% patients had increased Hb% in the range of 1.1-2gm.
- For Serum Proteins, there is increased in the level in the range of 0-1.5gm. Only 1 patient out of 30 (3.33%) had difference by 1.5gm after treatment.

From this data we can say that the average change for Hb% & Sr. Proteins was very low.

The statistical observations show that result is highly significant. (p<0.0001)

**CONCLUSION**

- Triphala Kwath with Goghrita (Butyrum departum) & Sita (Sugar)* is quite effective in the treatment of *Vataj Pandu*.
- Vataj Pandu roga* can be effectively compared with Iron Deficiency Anemia on the grounds of its similar signs and symptoms.
- From the all symptoms of *Vataj Pandu* mentioned in Ayurvedic texts, symptoms like *Varchashosha* (Dryness of stool), *Anaha* (Constipation), *Asyavairasya* (Distaste in mouth), *Parshwashool* (Shooting pain in the region of ribs), *Shirashoola* (Headache), *Ruja* (Pain) & *Balakshaya* (Weakness) shows significant relief. Therefore we can conclude that *Triphala Kwath with Goghrita (Butyrum departum) & Sita (Sugar)* is quite effective in the management of *Vataj Pandu*.
- The drug used was cost effective & easy to take.
- No side effects were seen.

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