



ROLE OF DARVYADI LEHA IN THE MANAGEMENT OF PANDU

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ABSTRACT

Introduction: *Pandu* (Anemia) is one of the most common diseases occurring worldwide. Caused due to lack of nutritious and improper food, stress, certain disease conditions etc. Aim of the study was to evaluate the efficacy of *darvyadi leha* in *pandu* in a controlled study. *Darvyadi leha* use can be a promising treatment for various types of *Pandu*. **Methods and Materials:** An Open randomized controlled study was carried out on 60 patients of Anemia. *Darvyadi leha* containing *daruharidra*, *loha bhasma* and *triphala* as chief constituents was given to first 30 patients as trial group and rest 30 patients that is control were given cobadex forte, both for 60 days. The study was entirely based on clinical observation and lab investigation. These patients were advised strict diet and activity. **Observations:** Marked improvement in signs and symptoms of *Pandu* patients was observed. **Conclusion:** The *darvyadi leha* effectively managed the *pandu* and can be used as alternatives to modern drug therapy.

KEYWORDS: Anemia, *Berberis aristata*, *Darvyadi leha*.

INTRODUCTION

Anaemia (*Pandu*) is a physiological condition in which the person suffer from fatigue, tiredness, shortness of breath, weakness, inability to do the exercise and the etiology behind it, is loss of red blood cells or loss in their oxygen-carrying capacity, improper diet, certain disorder, parasitic infection, or inflammation could be the reason behind it. It is one of the most commonly occurring conditions.

The disease *Pandu* has been vividly and quite in detail described in Ayurveda. *Pitta Dushti* because of the intake of fast-food and spicy food with less or non nutritious food is the prime reason in the formation of *Pandu*. Malnutrition contributes significantly to the development of improper *Dhatu Poshana* leading to *Bala* and *pittakshaya*. These are reflected as symptoms of *Pandu*.

Quite numbers of drugs have been mentioned in the treatment of *Panduroga* in Ayurvedic *Grantha*. The aim this study is to evaluate efficacy of *Darvyadi leha* in the treatment of *Panduroga*. This specific *Kalpa* contains *Kasthauashadhi* i.e. medicines obtained from bark, stem, etc as well as *Loha Bhasma*.

Pandu denotes a specific change of colour of the patient due to disease. The word *Pandu* takes its origin from basic Sanskrit word '*Padi*' meaning of which is to deviate or distort.

Charak and *Vagbhata* has mentioned that *Panduroga* is *Rasa Pradoshaja* i.e. disease of *Rasavaha srotasa* while according to *Sushrut* it is *Raktapradoshaj vyadhi*.

Rasa and *Rakta dhatu* are the main *dhatu* involved in the *samprapti* of *Panduroga* *Samprapti* means detailed disease process i.e. pathogenesis.

Following are stages of *samprapti* of *Pandu*.

- 1) *Sanchaya*: - In *Pandu Roga* due to excessive intake of *paittik ahar-vihar*, the *pitta dosha* will be vitiated which accumulates in its chief site i.e. *Amashaya*.
- 2) *Prakopa*: - Due to continuous indulgence of *hetu*, the *pittadosha* increase further and spread to many of their own sites like *Yakrut*, *Pliha*, *Twak*, *Drik* etc and produce its own specific symptoms.
- 3) *Prasara*: - Excited *pittadosha* enter into *Hridya* by leaving its original site. After reaching *Hridya*, this excited *pitta* spread to all over body through *Dhaminies*, with the help of *Vayu*.
- 4) *Sthan Samshraya*: - In this stage *Dosha-Doshya Samoorchhana* occurs. The increased *Dosha* travelling all over the body mixed with the circulating *Rasadhatu* and now tend to localize in particular tissue, and organ.
- 5) *Vyakti*: - After localization of vitiated *Pitta* in between *Twak* and *Mansa*. The specific sign and symptoms of *Pandu* like pale yellow and greenish and different type of discolouration skin develops.

- 6) *Bheda*: - In this stage, the disease may subside or it may passed to sub acute or chronic stage or stage of complications. e.g. *Shishridwesh* (Dislike to cold).^[1]

Classification of *Pandu Roga*

- 1) ***Vataj Pandu***: Due to provocation of vata there is formation of *Vataj Pandu*.
- 2) ***Pittaj Pandu***: Due to provocation of pitta there is formation of *pittaj pandu*.
- 3) ***Kaphaj Pandu***: Due to kapha provocation factors, there is vitiation of *Rakta* by *kapha* there is production of *Kaphaj Pandu*.
- 4) ***Sannipataj Pandu***: All the factors mentioned above in a combined manner give rise to this type of *Pandu*.
- 5) ***Mridbhakshanjanya Pandu***: This type of *pandu* is produced by eating soil in children which provoke *tridosha* which forms *Aam* (toxic products) which causes *srotorodh*. Due to this all the body elements suffer from lack of nourishment and result in *Pandu Roga*.

Treatment of *Pandu Roga* in *Yukti Vyapashraya* includes

- 1) *Nidan Parivarjana*
- 2) *Snehan* (Oleation therapy)
- 3) *Shodhan chikitsa*
- 4) *Sanshaman and Lakshnik chikitsa*.^[1]

Causes

From Ayurvedic point of view: Food having *kshar*, *amla*, *lavan*, *atiushna* properties, *diwaswap* (afternoon sleep), mental stress, improper diet.

From modern point of view: Haemorrhage- loss of blood. Inadequate production of normal red blood cells. Excessive destruction of red cells: - haemolysis, deficiency of iron, deficiency of Vit B12.

For treatment of anaemia *darvyadi Leha* has been selected which is also mentioned by *Charak*.^[2]

Following reason were considered while selecting the *leha*,

- 1) Easily available
- 2) Palatable
- 3) Quiet economical

Darvyadi Leha mainly contains *Daruharidra*, *Triphala*, *Trikatu* and *Loha bhasma*. The herbs and iron are of great importance in the treatment of anaemia.

MATERIALS AND METHODS

Source of data: Patients were selected from *Kayachikitsa* Outdoor patient department & Indoor Patient Department of *Kayachikitsa* dept., S.V.N.H. ayurveda college, Shrishivajinagar Dist. A.nagar. The patients were registered and treated.

Study type: An Open randomized controlled study was carried out. Follow up assessment of every patient was done by specially prepared case record form. Signs and symptoms were recorded at each follow up. Once diagnosed, patients advised to take drug for 60 days. Follow up is taken after every 15 days up to 2 months. The clinical examination was done to evaluating symptomatic improvement on after 15th, 30th, 45th, 60th.

Sample size: Patients full filling the inclusion criteria were selected for the study. Every patient was asked to sign the written voluntary consent in presence of doctor and local witness. 60 patients of *pandu* were taken for the study, 30 patients of which were categorized in trial group whom *darvyadi leha* was given and remaining a 30 patients were included in Control Group (Cobadex forte capsule were administered), approval from the Institutional ethics committee was taken before conducting the clinical study.

Inclusion criteria: The patients of both sex, within age group of 18-60 years, along with the patients who were suffering from disease or having following signs and symptoms were taken for the study.

i) *Durbalata* ii) *Panduta* iii) *Mandagni* iv) *Ayassenashwas* v) *Hritspandai* vi) *Akshikootshotha* vii) *Pindikodweshatan* viii) *Karnashweda* ix) *Bhrama* x) *Gaurav* xi) *Gayatrapida* xii) *Aruchi* xiii) *Nidradhikya* xiv) *Shishirdweshi* v) *Jvar*

Exclusion Criteria: Patients with following *updravas* (symptoms) e.g. *Shoth*, *Udar*, *Kamala* and *Hridroga* etc. were excluded. Patients having bleeding disorders like *Rakatapradara*, *Raktapitta* etc. were also avoided. Patients having Hb% below 5gm were excluded. Patients having complicated type of anaemia e.g. haemolytic anaemia were excluded. Patients having malignancy, patients with acute alcohol withdrawal state, intoxication, pregnant and lactating mother and psychotic patients were excluded.

Excluding all the patients mentioned exclusive criteria, 60 patients having main *samprapti* of *Pandu Roga* were selected for the present study.

Drug material

Darvyadileha contains following content: 1. *daruharidra* - *Berberis aristata*, 2. *Triphala* - *haritaki* (*Terminalia chebula*), *bibhitak* (*Terminalia bellerica*), *amla* (*Phyllanthus emblica*), 3. *Trikatu* - *pimpali* (*Piper longum*), *marich* (*Piper nigrum*), *sunthi* (*Zingiber officinale*), 4. *vidanga* (*Embelia ribes*), 5. *loha* (Iron) 6. *madhu* (sugar), 7. *ghrita* (ghee).^[3] *Lehas* are powdered mixtures prepared by pounding dry, mineral, animal, or vegetable substances in mortar-pestle, and passing the powder through muslin cloth or linen or fine sieve and *madhu* and *ghrut* were added.

Matra of the *Choorna* according to *Sharangdhar* 1 *karsha* i.e. 10-12 grams.^[4]

Intervention

The patients of group A were given Darvyadi Leha orally before meal (*Apan kala*). The dose of *Darvyadi Leha* was two tablespoon twice daily. The patients of the group B were given capsules cobadex forte. The patients were allowed to do their all regular daily work. These patients were advised strict diet and activity i.e. *nidan parivarjana & pathyapalana*.

Assessment Criteria

The patients of anemia were Assessed for the effect of *darvyadi leha*, on the basis of clinical observations and %Hb.

Statistical Methods

Common test of significance in use are paired 't' test for statistical analysis.

Investigation Specific investigations such as test were carried out by subjective examination 0- Absence of symptoms

- 1- Mildness of symptoms
- 2- Moderate symptoms
- 3- Severe symptoms

Criteria of Upashaya

- 1) *Uttam Upshaya*- upashaya above 70%
- 2) *Madhyam Upshaya*- between 30% to 70%
- 3) *Heena Upshaya*- Upashaya below 30%
- 4) *Anupashaya*-no response to treatment.

RESULTS**Table 1: Sex wise distribution of patients.**

Gender	Group A		Group B		Total
	No. of Patients	%	No. of patients	%	
Male	17	56.67	10	33.33	45
Female	13	43.33	20	66.67	55

Table 2: Age wise distribution of patients.

Age	Group A		Group B	
	No. of Patients	%	No. of patients	%
11 to 20	1	3.33	1	3.33
21 to 30	12	40.00	15	50.00
31 to 40	12	40.00	8	26.67
41 to 50	4	13.33	3	10.00
51 to 60	1	3.33	3	10.00

Table 3: Prakruti wise distribution of patients.

	Group A		Group B	
	No. of Patients	%	No. of patients	%
<i>Vatpittatmak</i>	7	23.33	6	20.00
<i>Vatkaphatmak</i>	4	13.33	4	13.33
<i>Pittavatatmak</i>	6	20.00	5	16.67
<i>Pittakaphatmak</i>	4	13.33	4	13.33
<i>Kaphvatatmak</i>	5	16.67	6	20.00
<i>Kaphpittatmak</i>	4	13.33	5	16.67

Table 4: Distribution of patients according to Hetu

<i>Hetus</i>	No of Patients	
	Group A	Group B
<i>Ahara</i>	27	25
<i>Vihar</i>	20	18
<i>Manasik</i>	3	5
<i>Vyasan</i>	3	4
<i>Vishesh</i>	10	8

Table 5: Distribution of patients according to Types of Pandu.

	Group A		Group B	
	No. of Patients	%	No. of patients	%
<i>Vataj</i>	10	33.33	9	30.00
<i>Pittaj</i>	6	20.00	5	16.67
<i>Kaphaj</i>	12	40.00	11	36.67
<i>Mridibhakshanjanya</i>	2	6.67	5	16.67
	30	100	30	100

Table 6: Distribution According to Upashayas of Sign and Symptoms.

	Group A			G Group B		
	No. of Patients BT	No. of Patients AT	%	No. of Patients BT	No. of Patients AT	%
<i>Durbalata</i>	25	16	64.0	26	12	46.14
<i>Panduta</i>	30	25	83.3	30	14	46.67
<i>Mandagani</i>	27	19	70.37	25	15	60.00
<i>Ayashashwas</i>	28	19	67.86	25	16	64.00
<i>Hridspanda</i>	27	19	70.37	24	16	66.67
<i>Akshikootashotha</i>	23	18	78.26	23	16	69.57
<i>Pindikodweshan</i>	26	20	76.92	20	17	85.00
<i>Karnashweda</i>	20	17	85.00	20	14	70.00
<i>Bhram</i>	20	19	95.00	23	16	69.57
<i>Gaurava</i>	15	13	86.67	22	15	68.18
<i>Gatrapida</i>	24	20	83.33	23	13	56.52
<i>Aruchi</i>	24	22	91.67	20	14	70.00
<i>Nidradhikya</i>	17	16	94.12	21	14	66.67
<i>Shishirdweshi</i>	8	7	87.50	16	10	62.50
<i>Jwar</i>	3	2	66.67	4	2	50.00

Table 7: Hb before and after treatment of Group-A.

Sr. No.	Hb	
	BT	AT
Total	273.9	323.5
Mean	9.33	10.78

From Table 6, it was seen that Average Hb increased after 2 months in Group A (Darvyadi Leha). Hb increased from 9.13 to 10.78 gm%.

Table 8: Hb before and after treatment of Group-B.

Sr. No.	Hb	
	BT	AT
Total	252.1	260.4
Mean	8.40	8.68

From table 7, it was seen that average Hb increased after 2 months in group B (capsules cobadex forte). The Hb is increased from 8.40 to 8.68 gm%.

Table 9:

Group	Parameter	SD	t value	P value	Remark
A	Hb	0.85	10.7	<0.0001	Significant
B	Hb	0.21	7.056	<0.0001	Significant

DISCUSSION

On going through study both the theoretical as well as clinical with 60 patients (group A + group B) following observations were made.

According to Sex

Out of 30 patients of group A- 13 patients were females and 17 patients were males and 30 patients of group B having 20 patients were females and 10 patients were males i.e. 55% were females and 45% were males. i.e. occurrence of Pandu Roga is more in female.

According to Age

The incidence of the disease in the age group of 21-30 yrs and 31-40 yrs was high i.e. 40% in group A and incidence of the disease in the age group of 21-30 yrs was high i.e. 50% in group B.

According to distribution of prakruti

The incidence of vyadhi is more in *Vatpittamak* Prakruti, i.e. 23.33% in group A while in Group B i.e. 20%.

According to Hetus

The *Ahara Hetu* is found in 27 patients in group A and 25 patients in group B in which *tikta, Katu, amla, ushna ahar* is more common. While *Vihar* such as *diwaswap, jagaran* etc. found in 20 patients in group A and 18 patients in group B. *Manasik* such as *Chinta* in 3 patients in Group A and 5 patients in Group B. *Vishesh (Upadravajanya)* in 10 patients in group A and 8 patients in group B.

According to types

More patients were found of *Kaphaj Pandu* i.e. 12 patients (40%) in group A and 11 patients (36.67%) in group B.

In A group, increase in Hb was statistically tested by paired "t" test was 10.7, $p < 0.0001$ suggested that, *Darvyadi leha* significantly increases Hb.

In B group, increase in Hb was statistically tested by paired "t" test was 7.056, $p < 0.0001$ suggested that, *Cobadex forte* significantly increases Hb. This suggest that both the treatment were clinically useful.

Darvyadi leha has shown significant improvement in the condition which can attributed the various ingredients and their chemical constituent. *Daruharidra* (*B. aristata*) contains various vitamins, tannins, alkaloids, etc which helps healing and nutrition. Vit B helps in improvement of condition also vitamin C is present which is an antioxidant and helps iron absorption and therefore beneficial for the people with anaemia.

Lauha bhasma is the source of iron in *darvyadi leha* and helps in increasing Hb in RBC. *Triphala* helps in blood purification as it has antioxidant properties which helps in scavenging free radicals which also decreases oxidative stress also has hepatoprotective properties hence normalizes the bile levels which is related haemoglobin, porphyrin metabolism.^[5,6,7]

Trikatu and *vidang* help in increasing bioavailability of constituents of herbs administered concurrently as well as may be helping in absorption of the vit B12 and iron, which is thought to be the action of Piperine containing compounds present in *Trikatu* and *vidang*.^[8] This suggest the efficacy of *darvyadi leha* in the management of anaemia.

CONCLUSION

Anemia is one of most common conditions, more than 10million cases are recorded alone in India. It affects the quality of health and disturbs daily routine. There are various medicines available for different causes and symptoms but darvyadi leha takes care of all the causes and symptoms. *Darvyadileha* is one of the popular preparation mentioned in ayurveda for treating anaemia. Still there are various combinations and preparation which can be used for management of anaemia and studied further with the use of various other investigational parameters.

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