

EVALUATION OF EFFICACY OF DARVYADILEHA IN GARBHINI PANDU

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ABSTRACT

Anaemia is a common hematological disorder that occurs during pregnancy. It is a major public health hazard in India, nearly 40-90% of pregnant women are considered as anaemic. In Pregnancy, nutrition is used for nourishment of herself, fetus, placenta and breast. So nutritional requirements are high during pregnancy, which if not fulfilled will lead to deficiency disorders like Iron deficiency anaemia (I.D.A). Acharya Charaka in *Sharira Sthana* has explained about *Bala varna hani* of *Garbhini* in 6th month of pregnancy. It can be considered as reference for *Garbhini Pandu*. *Darvyadileha* because of its *deepana*, *pachana*, *shonitasthapana* and *rasayana* properties it was selected for the study. The clinical trial was carried out on 30 patients with 15 patients each in Group. Group A – *Darvyadileha* & Group B – *Amalaki avaleha*. Group A has shown percentage wise better results.

Keywords: *Darvyadileha*, *Garbhini Pandu*, Iron Deficiency Anaemia

INTRODUCTION

Anaemia is one of the commonest disease conditions which affect a pregnant woman. The desire to have a healthy progeny is innate & very intense in every living being. The incidence of anaemia in pregnancy ranges widely from 40-80% in developing countries and 10-20% in developed countries¹. Pregnancy is always demanding. Pregnant women need to absorb 2-3 times the amount of Iron compared

to non pregnant women. In Pregnancy, nutrition is used for nourishment of herself, foetus, placenta and breast. There is disproportionate increase in plasma volume, RBC volume and Haemoglobin. The increase in plasma volume is much greater than the RBC volume, results in haemodilution. There is marked demand of extra iron during pregnancy especially in the second half. Even adequate diet cannot pro-

vide the extra demand of iron. So nutritional requirements are high during pregnancy, which if not fulfilled will lead to deficiency disorders like Iron deficiency anaemia (I.D.A)². According to W.H.O, Anaemia in pregnancy is defined as haemoglobin concentration in peripheral blood is less than 10gm/dl³.

*Panduroga*⁴ is a *Rasa Pradoshaja Vikara* and *Santharpanotha Vikara*. *Rakta* has its own importance as told in Ayurvedic literature. *Rakta* has been considered as a key factor for the *Jeevana*, *Prinana*, *Dharana* and *Poshana karma* of the *Sharira*. Many a times it is seen that *Rakta* gets vitiated by *Doshas*, mainly by *Pitta dosha* as *Rakta* is *Pittavargiya* and disease like *Pandu* appear. Acharya Charaka in *Sharira Sthana* has explained about *Bala varna hani* of *Garbhini* in 6th month of pregnancy⁵. It can be considered as reference for *Garbhini Pandu*. The line of treatment in *Panduroga* is *shodhana*, but it is contraindicated during pregnancy. Hence appropriate *Shamana* treatment has to be adopted. For this purpose "*Darvyadileha*⁶" because of its *Deepana*, *Pachana*, *Shonitasthapana* and *Rasayana* properties mentioned in *Charaka Samhita*, *Panduroga Chikitsa Adhyaya*, had been selected.

SELECTION OF CASES:

Total 30 clinically & confirmed cases of *Garbhini Pandu* were registered for the clinical trial. The patients selected from the OPD & IPD of Alvas Ayurveda Medical College, Moodabidri in the year of 2012-2013.

STUDY DESIGN

A single blind comparative clinical study of two groups, trial and control consisting of a minimum of 15 patients each.

Group-A- *Darvyadileha* in the dose of 2.5gms orally twice daily, after food with *Madhu* and *Ghritha*, for the period of 60days.

Group-B- *Amalaki avaleha* in the dose of 6gms orally twice daily, after food with the *Ushnajala* as *Anupana* for the period of 60days.

FOLLOW UP:

Once in a 30 days during study period of 60 days i.e 30th and 60th day .

DIAGNOSTIC CRITERIA:

1. *Panduta* (pallor), *Arohana ayasa* (exertional dyspnoea) with or without other *laxanas* of *Garbhini Pandu* as mentioned in classical text books.
2. Haemoglobin percentage between 8-10gm%.

INCLUSION CRITERIA:

- 1) Patients fulfilling the diagnostic criteria.
- 2) Patients between the age group of 20-35 years.
- 3) Patients in between 16weeks to 24 weeks.
- 4) Primigravida and multigravida.

EXCLUSION CRITERIA:

1. Anaemia due to Thalaessemia, Sickle cell anaemia, Pernicious anaemia. Haemolytic anaemia, Aplastic anaemia and other complications like bleeding piles, multiple pregnancy.
2. Any other obstetric complications like Pre-eclampsia, Gestational diabetes. Systemic

diseases such as Hypertension, Diabetes, Nephritis etc.

OBSERVATIONS:

Among the 30 patients, 36.66% of patients were in the age group of 20-25 yrs, 43.3% of patients were in the age group of 26-30yrs and 20% patients in the age group of 31-35yrs. Among 30 patients maximum of 66.7% of patient were Hindu, 23.3% of patients were Muslim and 10 % Christian. In 30 patients, 70% were housewife, while 30% were working. Based on education status 53.33% had completed high school, 16.7% had completed PUC and 30% had completed graduation. In the study 10% were from low class,

86.7% were from middle class and 3.3% were from high class. In the study 33.3% patient were mixed diet, and 66.7% were consuming vegetarian diet. In the study 33.3% were from rural area and 23.3% were from urban. In the study, 63.3% were Primipara and 36.7% were multipara. Among 30 patients, 56.7% had regular menstrual cycle and 43.3% had irregular menstrual cycle. Among 30 patients, 50% patients were preferring *lavana rasa* dominant food, 33.3% were *amla rasa*, and 16.6% were preferring *katu rasa* dominant food. Among 30 patients, 53.3% patients were following *avara* quantity of food and 46.6% patients were following *madhyama* quantity of food.

RESULTS:

Table 1: The Effect On Hemoglobin In Group A (0, 30th, 60th day)

Mean BT	Mean AT	%	D	Mean AT	Paired test				df
					SD		t	P	
2.00	AT1	1.66	17%	AT1	0.48	14	2.64	<0.02	14
2.00	AT2	1.00	50%	AT2	0.65	0.16	5.96	<0.0001	

Table 2: The Effect On Hemoglobin In Group B (0,30th,60th day)

Mean BT	Mean AT	%	D	Mean BT	Paired test				Df
					SD		T	P	
1.66	AT1	1.33	19.8%	1.66	0.48	14	2.64	<0.02	14
1.66	AT2	1.13	31.9%	1.66	0.63	0.16	3.22	<0.001	

Table 3: The Effect Of Treatment On Investigation Parameters In Group A (0-60th day):

Investigations	Mean		%	Mean Difference	SD	SE	t value	P
	BT	AT						
P.S	1.53	1.00	34%	0.53	0.51	0.13	4.00	<0.01
MCV	1.46	0.86	41%	0.60	0.73	0.19	3.15	<0.01
MCH	1.86	1.26	32.2%	0.60	0.63	0.16	3.67	<0.01
MCHC	1.93	1.60	18.8%	0.33	0.48	0.12	2.64	<0.02
PCV	1.73	1.06	38.7%	0.66	0.81	0.21	3.16	<0.01

Table 4: The Effect of Treatment on Investigation Parameters on Group B (0-60th Day):

Investigations	Mean		%	Mean Difference	SD	SE	t value	P
	BT	AT						
P.S	1.46	1.13	22%	0.33	0.48	0.12	2.64	P.S
MCV	1.53	1.06	30.7%	0.46	0.74	0.19	2.43	MCV
MCH	1.60	1.26	21.2%	0.33	0.48	0.12	2.64	MCH
MCHC	1.60	1.33	16.8%	0.26	0.45	0.11	2.25	MCHC

Table 5: Comparative Effect of Treatment on Group A and Group B on Both Criteria (0-60th Day):

Symptom	BT-AT Mean		Mean Difference	% relief		Standard deviation		t value	P
	Group A	Group B		Group A	Group B	Group A	Group B		
Durbalata	1.33	0.86	0.47	66%	45.5%	0.72	0.63	1.87	>0.05
Arohanayasa	1.00	0.66	0.33	50%	31.1%	0.65	0.61	1.43	>0.05
Hridaya spandana	0.73	0.66	0.06	40%	40%	0.45	0.61	0.33	>0.05
Bhrama	1.06	0.80	0.26	66.6%	56.6%	0.59	0.56	1.26	>0.05
Pallor	0.93	0.80	0.13	53.3%	47.7%	0.59	0.67	0.57	>0.05
Hb	1.00	0.53	0.46	47.7%	25.5%	0.65	0.63	1.97	>0.05
P. S	0.53	0.33	0.20	33.3%	20%	0.51	0.48	1.09	>0.05
MCV	0.60	0.33	0.26	36.6%	16.6%	0.73	0.33	1.16	>0.05
MCH	0.60	0.33	0.26	30%	16.6%	0.63	0.48	1.29	>0.05
MCHC	0.33	0.26	0.07	18.8%	13.3%	0.48	0.45	0.38	>0.05
PCV	0.66	0.40	0.20	30%	24%	0.81	0.63	1.00	>0.05

There is not a statistically difference between two groups at P>0.05.

Chart 1: Overall Relief Observed In Patients of Group A & B

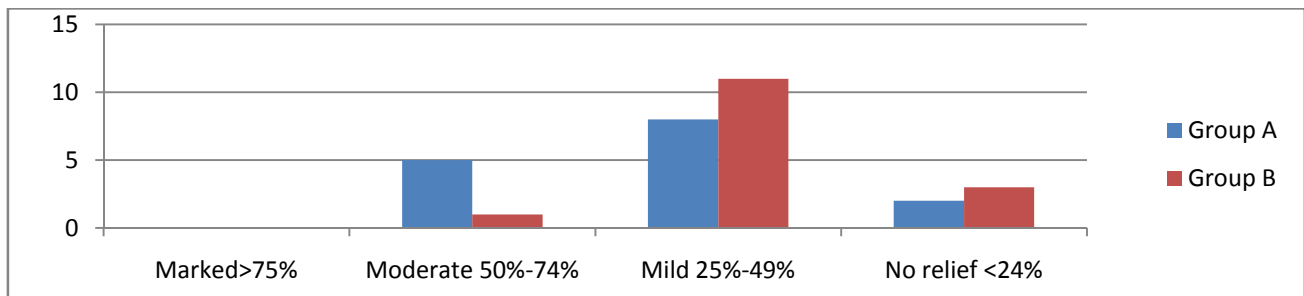


Table 6: Overall Relief Observed In Patients of Group A & B:

Remarks	Group A	%	Group B	%
Marked relief above 75%	0	0%	0	0%
Moderate relief 50%-74%	5	33.3%	1	6.6%
Mild relief 25%-49%	8	53.3%	11	73.3%
No relief below 24%	2	13.3%	3	20%

In group A, no (0%) patients had markedly improvement, 33.3% of patients were moderately improved, 53.3% of patients were partially improved, 13.3% of patients showed no improvement.

In group B, no (0%) patients had markedly improvement, 6.6% of patients were moderately improved, 73.3% of patients were partially improved, 20% of patients showed no improvement.

There is no significant difference between two groups. Clinically percentage wise in all the symptoms Group A i.e. *Darvyadileha* is better than Group B i.e. *Amalaki avaleha*.

DISCUSSION

It is seen that to relieve the signs and symptoms and increase hemoglobin percentage both *Darvyadileha* and *Amalaki avaleha* are effective. *Amalaki avaleha* contains *Amalaki* as major ingredient, *Amla* mitigates the *pitta dosha* and correct the *Pandu*. *Yastimadhu* & *Munnakka* act as *raktaprasadaka* & *balya*. *Ardrak* act as a blood purifier. So it will treat *Vivarnata* and decrease anaemia *Vanshlochan* is also useful in diseases of blood and general debility and act as a diuretic. *Darvyadileha* has *katu, tikta, kashaya, madhura rasa* and it act as *deepana, pachana, tridosahara, sroto-shodaka, raktavardhaka, balya*. *Amalaki*⁷ also contain ascorbic acid which converts ferric form of iron in ferrous form and iron absorption always take place in ferrous form. *Haritaki*⁸ has ferric reducing antioxidant activity. Therefore, iron absorption easily happens. *Pippali, Shunti, Maricha, Daruharidra* shows *deepana, pachana*, properties and increase in the function of *Dhatwagni, Pachakagni* and cures *mandagni*. *Vidanga, Daruharidra* exerts

the *krimigna* properties and also helps for *agnideepana*. *Raktavardhaka* property is present in *Loha Bhasma*. *Loha Bhasma* possesses significant hematinic and cytoprotective activity⁹. *Loha Bhasma* has also hemoglobin regeneration efficacy¹⁰. *Madhu* and *Gritha* act as *Yagovahi* by which they enhance the medicinal qualities and also help them to reach the deeper tissues. Hence the drug formulation of *darvyadileha* makes it more potent in increasing the haemoglobin levels considerably when compared with *amalaki avaleha*.

CONCLUSION

Garbhini Pandu may be correlated with iron deficiency anaemia in pregnancy, which is commonly seen due to increase demand of nutrition from developing foetus. In the present study on comparison a better percentage wise of improvement was noted in group A (*Darvyadileha*) in terms of subjective and objective parameters than group B (*Amalaki avaleha*). *Darvyadileha* causes the improvement of metabolism and enhance iron absorption and increase in the Hb% considerably, which in turn leads to relief of *Garbhini Pandu* symptomatically.

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