



TO COMPARE THE ROLE OF GUDUCYADI CHURNA AND PUNARNAVA MANDURA AS AN INTERNAL INTERVENTION IN THE MANAGEMENT OF PANDU-ROGA WITH SPECIAL REFERENCE TO ANAEMIA

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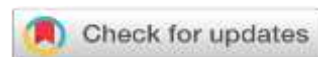
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ABSTRACT

In *ayurveda*, we not only treat the disease but make sure that it doesn't reoccur. To accomplish such a purpose *ayurveda* focuses on *agni*. One such disease in which *agni* plays a major role is *Pandu-roga*. In modern science, we can correlate *Pandu-roga* with Anaemia. There are a lot of iron compounds available for the treatment of *Pandu-roga*, but the major aim of this study was to find out a drug that deals with *Agni* and as a result, *Rasa dhatu* is formed in a proper manner. *Acharya Charaka* has mentioned *pandu-roga* as a *rasa-pradoshaj-vyadhi* therefore without correcting the proper formation of *ras-dhatu* we cannot accomplish treating *Pandu-roga*. In the present study, 60 patients were included with signs and symptoms of *pandu-roga*. 30 patients were included in the trail group in which *Guduchyadi churna* was administered and 30 patients were included in the control group in which *Punarnava mandura* was administered for 45 days. And the result was obtained by comparing both groups.

Keywords: *Pandu-roga*, Anaemia, *Agni*, *Rasa pradoshaj vyadhi*, *Guduchyadi churna*, *Punarnava mandura*.

INTRODUCTION

Pandu-roga is characterized by the pallor of the body which is known as Anaemia in modern science. The

etiology and symptoms of *Pandu-roga* date back to 2000yrs. This study is on *Pandu-roga* which is a *Ra-*

sa-pradoshaja vikara with Alpa-rakta(reduced red blood cells)or vidushya rakta (vitiated blood) as per Acharya Charaka. It means that at first rasa dushti occurs thereafter leading to an imbalance of further dhatus.¹ In Ayurveda, the word "Pandu" denotes pale or yellowish-white color. In Charaka Samhita after the description of the importance of Agni in chapter 15 of chikitsa sthan (Grahani Chikitsa), Acharya has described Pandu in chapter 16th therefore clearly suggesting the role of Agni as the main cause of rasadhātu-gatagni dushti leading to improper rasa formation. Blood is an integral part of the human body and a method to supply oxygen and nutrients to every cell of the body. RBCs in Blood contain haemoglobin to which oxygen binds and is carried to every cell of the body to carry out their metabolic functions. Similarly, in ayurveda "Rakta" has been said to play a key role in the Jeevan, pridanana, dharana, and poshana of the body.

Anaemia is a condition in which there is a reduced number of RBCs or Haemoglobin concentration within the RBCs or not enough Haemoglobin. There will be decreased capacity of blood to carry oxygen to the body's tissues.[WHO] Anaemia is a global public health problem effecting both developing and developed countries with major consequences for human health as well as social and economic development. Globally anaemia effects 1.62 billion people (CI-95%), which corresponds to 24.8% of the population(CI-95%).The highest prevalence is in preschool-age children(47.4%,95%CI) and the lowest prevalence is in men(12.7%,95%CI). WHO region-wise record- Southeast Asia- 14.9% prevalence rate.²

AIMS AND OBJECTIVES:

1. To evaluate the efficacy of Guduchyadi churna when administered orally for 45 days in the management of Pandu-roga with special reference to Anaemia in the age group 7-70years.
2. To compare the effect of Guduchyadi churna and punarnava mandura when given orally for 45days in the patient of Pandu-roga.

MATERIAL AND METHODS:

1. Selection of cases- 60 patients clinically diagnosed with Pandu-roga were selected from OPD and IPD of the PG Department of Kayachikitsa, L.K. Ayurvedic hospital, Yavatmal.

a) INCLUSION CRITERIA:

- All willing patients of Age 7-70 yrs. irrespective of gender.
- Hb- <11gm% in females and <12gm% in males.
- All patients irrespective of gender, occupation, religion, and economical barrier.
- Patient with clinical signs and symptoms as described in classical texts such as:
 - i. Panduta (pallor),
 - ii. Daurbalya (Generalised weakness),
 - iii. Shirashoola (headache)
 - iv. Shwasa (dyspnoea),
 - v. Hridayaspandanam (palpitation),
 - vi. Aruchi (anorexia),
 - vii. Pindikodweshthana (pain in calf muscles),
 - viii. Bhrama (giddiness),
 - ix. Rukshata (dryness),
 - x. Gauravata (heaviness)
 - xi. Shrama (fatigue).

b) EXCLUSION CRITERIA:

- 1) Hb <7 gm%
- 2) Patients suffering from haematological disorders like sickle cell anaemia, thalassemia.
- 3) Patients suffering from severe systematic disorders such as uncontrolled DM, HTN, Cardiovascular diseases, AIDS, blood cancer like leukemia, lymphoma, multiple myeloma, and GIT cancers like stomach or colon cancer.
- 4) Pregnant and lactating mothers.
- 5) Anaemia of peripheral causes: due to blood loss, hemolysis, multiple myeloma, hypersplenism, and anorectal diseases like hemorrhoids and fissures.
- 6) Surgical history of removal of the small bowel, and resection of the stomach.

TABLE 01: Showing grouping of patients:

Group	Group A (Trial drug)	Group B (Control drug)
Number of Patients	30	30
Treatment	<i>Guduchyadi Churna</i> ³	<i>Punarnava Mandura</i> ⁴
Dose	3 gms	250mg
<i>Kalpna</i>	<i>Churna</i>	<i>Vati</i>
<i>Anupan</i>	<i>Ushna-Udaka</i>	<i>Takra</i>
Duration	45 days	45 days
Time of Administration	Twice a day, After the meal	Twice in a day, After the meal
Route	Oral	Oral

2. Selection of drugs: Taking the symptoms and the *samprapti* of *Pandu-roga* into consideration, *Guduchyadi churna* as a trail drug and *Punarnava mandura* as a control drug were selected.
3. Contents of *Guduchyadi churna*: *Guduchi, ativisha, shunthi, bhunimba, yavatikta, musta, Kada, Bhramar, Yavakshar, kasisa bhasma*.
4. Contents of *Punarnava Mandura*: *Punarnava, Trivrit, Vyosha, Vidang, Daruharidra, Chitrak, Kushta, Haridra, Triphala, Danti, Chavya, Kalinga, Pippali, Pippali moola, Musta, Shuddha Mandura bhasma, Gomutra*.
5. Assessment criteria:
 - a. Subjective criteria: all parameters were assessed before and after treatment.

Table 02: Describing criteria for gradation in *Pandu-roga*.

Sr. No.	Symptoms	Criteria for gradation			
		Grade 0	Grade 1	Grade 2	Grade 3
1.	<i>Panduta</i> (Pallor)	Absent	Visible only in the sclera	Visible only in the sclera and nails both	Visible in the sclera, nails, face, tongue, etc
2.	<i>Daurbalya</i> (Generalised weakness)	Absent	Slight weakness, but work can be complete	Weakness due to which work is interrupted moderately	Weakness affecting routine work
3.	<i>Shirahshoola</i> (headache)	Absent	Occasional headache 1–2 times/month; mild and relieved by rest	Headache 3–4 times/month; relieved by rest or local application	Headache >4 times/month; severe with nausea and require medicine
4.	<i>Shwasa</i> (dyspnea)	Dyspnea after heavy work but relieved soon and up to tolerance	Dyspnea after moderate work but relieved later and up to tolerance	Dyspnea after little work but relieved soon and up to tolerance	Dyspnea without any work, not relieved, and beyond tolerance
5.	<i>Hritspandan</i> (palpitation)	Absent	Present only during some exercise that subsides itself on rest	Present during the normal routine activities that subside itself on rest	Present during the normal routine activities but does not subside on rest
6.	<i>Aruchi</i> (anorexia)	The normal desire for food	The desire for food, a little late than normal time	The desire for food only to favorite items	No desire at all
7.	<i>Pindika Udveshtana</i> (pain in calf muscles)	Absent	After heavy work	Only at night but beyond tolerate	The whole day, without work, severe, require medicine
8.	<i>Brahma</i> (giddiness)	Absent	Sometimes experience giddiness which is not disturbing the routine work	Often experience giddiness which needs rest and disturbs routine work	Regular giddiness which needs treatment
9.	<i>Rukshata</i> (dryness) in - <i>Twaka, Nakha, Chestapaharana, Kesha</i>	Absent	In any 2 of these	In any 3 of these	In all <i>twaka, nakha, hastapadatala, kesha</i>
10.	<i>Gaurava</i> (heaviness)	Absent	Feeling of heaviness once/ twice a day without affecting normal routine	Feeling of heaviness throughout the day but not up to the extent to affect the normal routine	Feeling of heaviness throughout the day which hampers normal routine
11.	<i>Shrama</i> (fatigue)	Absent	Increased fatigue over baseline, but not altering normal activities	Moderate/ difficulty in performing some activities	Severe, loss of ability to perform the activity

b) Objective criteria: The following laboratory findings were assessed before and after treatment: CBC, MCV, MCH, and MCHC.

OBSERVATION AND RESULTS:

Table 03: Showing Relative incidence of various symptoms:

Sr. No.	Symptoms	Group A		Group B		Total	
		No.	%	No.	%	No.	%
1.	<i>Panduta</i>	26	86%	25	83%	51	85%
2.	<i>Daurbalya</i>	27	90%	25	83%	49	81%
3.	<i>Shirashoola</i>	23	76%	12	40%	35	58%
4.	<i>Shwasa</i>	4	13%	2	6%	6	10%
5.	<i>Hridyaspandanam</i>	7	23%	11	36%	18	30%
6.	<i>Aruchi</i>	25	83%	22	73%	47	78%
7.	<i>Pindikodweshthana</i>	19	63%	13	43%	32	53%
8.	<i>Bhrama</i>	12	40%	14	46%	26	43%
9.	<i>Rukshata</i>	7	23%	4	13%	13	21%
10.	<i>Gauravata</i>	3	10%	6	20%	9	15%
11.	<i>Shrama</i>	7	23%	5	16%	12	20%

Table 04: Showing Average % relief in group A and group B:

Subjective Parameter	Group A		Group B		Comparative efficacy
<i>PANDUTA</i>	51.28%	Significant	92.66%	Significant	Treatment B
<i>DAURBALYA</i>	68.51%	Significant	89.33%	Significant	Equally effective
<i>SHIRA SHOOLA</i>	64.49%	Significant	86.11%	Significant	Treatment A
<i>SWASA</i>	75.00%	Not Significant	75.00%	Not Significant	Equally effective
<i>HRIDYA SPANDAN</i>	64.28%	Significant	68.18%	Significant	Equally effective
<i>ARUCHI</i>	69.87%	Significant	97.72%	Significant	Equally effective
<i>PINDIKO DWESHTAN</i>	58.77%	Significant	88.46%	Significant	Equally effective
<i>BHRAMA</i>	76.38%	Significant	89.28%	Significant	Equally effective
<i>RUKSHTA</i>	62.5%	Significant	100%	Significant	Equally effective
<i>GAURAVTA</i>	88.88%	Significant	75%	Significant	Equally effective
<i>SHRAMA</i>	78.57%	Significant	70%	Significant	Equally effective

Objective Parameter	Group A		Group B		Comparative efficacy
Hb%	10.87%	Significant	15.36%	Significant	Treatment B
TRBC	2.83%	Significant	2.92%	Significant	Equally effective
MCV	2.53%	Not Significant	2.78%	Not Significant	Equally effective
MCH	5.18%	Not Significant	6.05%	Not Significant	Equally effective
MCHC	2.09%	Significant	2.20%	Significant	Equally effective
Mean % improvement	48.88%		60.06%		

Table 05: Overall effect of therapy:

Overall Effect (Patient wise)	No. of patients			
	Group A		Group B	
	Count	%	Count	%
Marked improvement	0	0%	0	0%
Moderate improvement	0	0%	0	0%
Mild improvement	11	37%	16	53%
Unchanged	19	63%	14	47%
Total	30	100%	30	100%

DISCUSSION

To test the efficacy of each trial and control group Wilcoxon Signed Rank Test was used separately. To compare both the groups Mann-Whitney's U test was applied and results were obtained. *Pandu* is a *pitta pradhan Tridoshaj vyadhi*, we will discuss the effect of *Guduchyadi churna* on all three *doshas*. *Guduchi*, *ativisha*, and *bhunimba* these three drugs are *tridosha shamak*. *Shunthi*, *yavatikta*, *pippali*, *Bhramar*, *Yavakshar*, and *kasisa* are *kapha-vata-shamak*. *Musta* is *kapha pitta shamak*. Thus, we can conclude that this *churna* is working on all three *doshas* and balancing them. The main *srotas* effected are *rasavaha* and *Raktavah srotas* also *manovah srotas*. *Ushna* and *tikshana* property of the drug acts on *jatharagni* which dissolves the *ama* present in *srotas* and increases the *rasa dhatugata* and *rakta dhatugat agni*. *Agnimandya* is mainly responsible for the formation of *vidushya ras* and *rakta* hence developing *Pandu-roga*. Thus, we can conclude that *Guduchyadi churna* does the *samprapti vighatana* by acting on *Shukshma dhatugata agni*. Most of the contents of the drug have *katu tikta rasa*, this *rasa* mainly acts as *deepana* and *pachana* and increases the appetite of patients. *Ushna* and *tikshna guna* clear the *srotorodha* caused by *ama* and dissolves the impurities present in *ahar rasa*. If *ahar rasa* gets *Shodhit* then *dhatu*s and *sukshma-Dhatuagni* formed later are also *ama* free. Thus, this drug has multi-level action on *pandu-roga*. It also contains *kasisa bhasma*, a compound of iron (ferrous oxide). After clearing the *ama* from the passages it becomes easy for the iron to get absorbed. Digestion of *ama* from *srotas* and simultaneously giving iron

will enhance the capability of the body to increase iron absorption.

Ushna udak selected as *anupana* also works as *sroto-Shodhak* and *agni-varadhak* helping the medicine to get assimilated easily.

CONCLUSION

Pandu-roga is *pitta pradhan Tridoshaj vyadhi*. Various types of medications containing iron compounds are available in the market. The present study focused on correcting *agni-mandya* present in the *vyadhi*. All symptoms (except *Swasa* in Group A and Group B) were significantly reduced in both groups. (Wilcoxon Signed Ranks test; $p < 0.05$). When compared- *Pandu-ta* and Hb% got more effective results in group B and *Shirashoola* got more significant results in group A. Rest all symptoms and objective parameters were equally effective in both treatment groups. (Mann-Whitney's U test; $p > 0.05$) Average effect in symptoms- Trial group- 37% had mild improvement and Control group had 53% mild improvement. **The overall effect in patients in- the Trial group- was 48.88% and Control group- 60.06% improvement in symptoms and objective parameters.** Finally, we can conclude that- In percentage relief both groups show significant improvement in symptoms and objective criteria. On looking at average improvement control group is more effective than the trial group. Thus, the null hypothesis proves true in this Study on *Pandu-roga*.

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