

## CLINICAL EVALUATION OF TARAMANDOOR GUDA IN THE MANAGEMENT OF PANDU W.S.R.TO IRON DEFICIENCY ANAEMIA

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### ABSTRACT

*Pandu roga* is one of the diseases mentioned in *Ayurveda* characterized by the whitish discoloration of the skin due to the loss of blood. The disease is comparable with Anaemia in the modern medical literature. The incidence of the problem is high in school going children, adolescents and pregnant women. *Ayurveda* has abundance of number of useful drugs belonging to herbal, animal, mineral origin used as a single drug or in compound formulations. The present study was proposed to evaluate the efficacy of *Taramandoor Guda* in the management of *Pandu w.s.r.to* Iron Deficiency Anaemia. The study was conducted on 15 patients of IDA for a period of 60 days. Clinical features and haematological parameters were documented before, during and after treatment. The results thus obtained were finally subjected for statistical analysis of the therapy. The results showed improvement in majority of these parameters like Hb% showed an increase of 21.6%.

**Keywords:** *Pandu, Taramandoor Guda, Ayurveda*

### INTRODUCTION

*Pandu roga* is one of the diseases mentioned in *Ayurveda* characterized by the changes in the skin colour like white (shwet), yellowish (peeta), greenish (harita) etc. The disease *Pandu* is characterized by the presence of *Ketaki dhulinibhachaya* (discolouration resembling the colour of the *Pandanus* flowers<sup>1</sup>). The disease manifests with the vitiation of pitta dosha which in turn vitiates rakta Dhatu and consequently other Dhatus are vitiates as well<sup>2</sup>. *Pandu roga* as mentioned in *Ayurvedic* texts has a close resemblance with the disease anaemia available in modern texts. This resemblance is in the form of *Nidana, Samprapti, Lakshanas* and *Chikitsa*. Anaemia is the most prevalent

nutritional deficiency disease. Globally, 30% of the total world populations are Anaemic and half of these have Iron Deficiency Anaemia. Nutritional Iron Deficiency Anaemia is the most common cause of Anaemia in India<sup>3</sup>. IDA is a very common disease prevalent in the society and side effects of oral allopathic iron preparations are very frequently encountered.

The aim of present study is to prepare a herbomineral medicine to be effective in managing *Pandu roga/ Iron Deficiency Anaemia* without any side effects, the present study was carried out to study the efficacy of an *Ayurvedic* compound *Taramandoor Guda* over a period of 60 days.

## Materials and Methods:

**1. Source of data.** Patients suffering from *Pandu* were selected from OPD and IPD of Jammu Institute of Ayurveda and Research and Hospitals after fulfilling Inclusion and Exclusion criteria.

- **Selection of Drug:** The proposed trial drug is an *Ayurvedic* classical *Yoga* described in *Bhaishajya*

*Ratnavali, Shoolaroga Chikitsaparakarna* and *Chakradatta Parinamashoolaroga-adhikara*, appears to be safe since it contains *Triphala, Trikatu, Chavya, Chitraka, Vidanga, Mandoor-Basama, Guda* and *Gomutra* which are routinely used in practice<sup>4</sup>.

**Table 1:** Constituents of *Taramandoor Guda*<sup>4</sup>.

S.No.	Sanskrit Name	Latin Name	Quantity
1	<i>Vidanaga</i>	<i>Embelia ribes</i>	1 Part
2	<i>Chitraka</i>	<i>Plumbago zeylancia</i>	1 Part
3	<i>Chavya</i>	<i>Piper chavya</i>	1 Part
4	<i>Haritaki</i>	<i>Terminalia chebula</i>	1 Part
5	<i>Vibhitaki</i>	<i>Terminalia bellerica</i>	1 Part
6	<i>Amalaki</i>	<i>Embllica officinails</i>	1 Part
7	<i>Shunthi</i>	<i>Zingiber officinale</i>	1 Part
8	<i>Marich</i>	<i>Piper nigrum</i>	1 Part
9	<i>Pippali</i>	<i>Piper longum</i>	1 Part
10	<i>MandoorBhasma</i>	****	9 Parts
11	<i>Gomutra</i>	****	18 Parts
12	<i>Guda</i>	****	9 Parts

## 2. Plan of the Study.

- A detailed Clinical proforma was prepared to study the patients and disease. A single group comprises of 15 patients was given *Taramandoor Guda* 500mg BD for 60 days with *Sukhoshna Jal*.

## 3. Inclusion Criteria.

- Patients of both sexes between the age group of 15 to 60 years.
- Patients presenting with classical signs and symptoms of Anaemia.
- Patients having the Hb% in between 6 to 11 gm/dl.

## 4. Exclusion Criteria.

- Patients below 15 years of age and above 60 years of age were excluded from the study.
- Patients suffering from chronic diseases and haemorrhagic disorders were excluded from the study.
- Hereditary conditions were also excluded.
- Pregnant and lactating women.

## Criteria for Assessment

The following clinical findings were assessed before, during, and after the treatment: *Panduta* (pallor), *Daurbalyata* (weakness), *Bhrama* (confusion), *Aruchi* (anorexia), *Shwas* (dyspnea), *Hridspandanam* (palpitation), *Rookshata* (dryness) and *Pindikodwestana* (muscular cramps).

**Table 2:** Main symptoms wise distribution of 15 patients of *Pandu roga*<sup>5</sup>.

Symptoms	No. of Patients	Percentage
<i>Panduta</i>	15	100
<i>Daurbalya</i>	15	100
<i>Hridspandanam</i>	10	66.7
<i>Bhrama</i>	15	100
<i>Rookshata</i>	9	60
<i>Shwas</i>	12	80
<i>Aruchi</i>	10	66.7
<i>Pindikodwestana</i>	11	73.3

**Laboratory Assessment:**

**Blood- Hb%.**

**Subjective parameters:** As the disease is characterized by the changes in the colour (*Panduta*) of the skin, conjunctiva and other end organs of the body, the subjective assessment is given as follows:

0 – Normal skin colour in all parts of the body.

1 – Presence of pale palpebral part of conjunctiva without the presence of change in colour in the skin and nails.

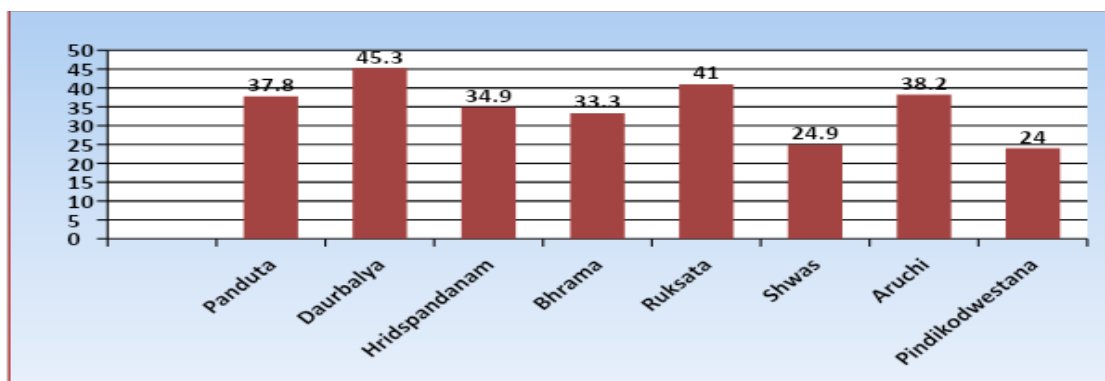
2 – Presence of pale palpebral part of conjunctiva, changes in the skin colour and nail colour, dryness and brittle nails.

3 – Presence of the above symptoms along with symptoms like palpitations, weakness and giddiness.

**Results**

**Table 3:** Effects of *Taramandoor Guda* on the *Pradhan Lakshanas* of *Pandu*.

Symptoms	Mean		%Relief	SD	SE	T	p value
	BT	AT					
<i>Panduta</i>	2.41	1.5	37.8	1.08	0.33	3.03	<0.01
<i>Daurbalya</i>	2.58	1.41	45.3	1.38	0.39	3.0	<0.01
<i>Hridspandanam</i>	1.92	1.25	34.9	0.91	0.26	2.57	<0.02
<i>Bhrama</i>	3.0	2.0	33.3	1.22	0.35	2.83	<0.02
<i>Ruksata</i>	1.83	1.08	41	1.11	0.32	2.34	<0.05
<i>Shwas</i>	2.33	1.75	24.9	1.03	0.29	2.0	<0.05
<i>Aruchi</i>	1.75	1.08	38.2	0.91	0.26	2.54	<0.02
<i>Pindikodwestana</i>	2.41	1.83	24	0.76	0.22	2.63	<0.02



*Panduta, Daurbalya, Hridspandanam, Bhrama, Ruksata, Shwasa, Aruchi, Pindikodwestana* have been relieved after treatment in complain to before treatment is 37.8%, 45.3%, 34.9%, 33.3%, 41%, 24.9%, 38.2% & 24% respectively where the ‘p’ value is

<0.01 (Highly Significant), <0.01 (Highly Significant), <0.02 (significant), <0.02 (significant), <0.05 (significant), <0.05 (significant), <0.02 (significant), <0.02 (significant) respectively.

**Table 4:** Effects of *Taramandoor Guda* on Hb%.

Symptoms	Mean		Relief %age	S.D	S.E	t score	p value
	BT	AT					
Hb%	9.95	11.25	21.6	1.47	0.42	3.09	<0.01

**DISCUSSION**

In this study, it is observed that most of the patients were females. Since we know that this disease is more prevalent in females. Significant fact is that one

among five women are Iron deficient all over the world and IDA is the 8th leading cause of diseases in females in developing countries. Reason behind this may be firstly, regular loss of blood due to menstua-

tion makes them more prone to develop Anemia. Secondly, the diet, as females are mostly found inclined towards spicy, sour, and bitter *ahara* rather than a balanced diet. Moreover, following menarche, females often do not consume enough iron to offset menstrual losses. As a result, a peak in the prevalence of iron deficiency frequently occurs among females.

About age, 43.3% of patients belonged to age group of 36-50 years; followed by 26.4 % patients to 15-25 years, 24.5% patients belonged to 26-35 years of age group. As the working persons are maximum in the age group 36-50 & they don't take food on time & in proper quantity. In case of females, mostly mothers are found in this age group & they share their own food with family.

It was found that maximum i.e. 52.8% were housewives and 18.8% were in Service and 13.2 % were students. The reason might be excessive labour and improper diet as well as inadequate diet. Also, most of housewives take *divaswapna* which causes *agnimandya* subsequently *dhatwagnimandya* and ultimately *rasa rakta dhatu dusti*<sup>6</sup>.

As *Panduta* is the most important sign as well as symptoms of *Pandu*. *Rakta dhatu*, *Pitta dosha* and *Oja* are responsible for the *Varna* and *Prabha*. So, when *rakta* and *pitta dushti* occurs, *oja* also gets affected simultaneously and the *Varna*(complexion) and *Prabha* (lusture) get affected and *Panduta* occurs.

*Daurbalyata* is the most prominent feature in *Pandurogi*. The reason for this is *Raktalpta* and *Ojakshaya* which causes the debility to do anything. In modern point of view, as blood cells are responsible for the oxygen supply to the all body tissues, so in anemia the metabolic activities are hampered& when this condition persists for a long period, debility appears.

*Hridspandanama* or Palpitations in *Pandu roga* is due to lack of proper nourishment and *Raktalpata* due to which heart must pump quickly to provide rapid blood flow to body tissues and that is the reason of Palpitation.

Maximum no of patients of *Pandu* have *daurbalyata* due to specific reason, and *bhrama* happens in *Pandu* mainly due to *Daurbalyata*.

*Pitta Dosha*, *Rakta dhatu* and *Oja* are responsible for *varna* and *prabha*. In *Pandu* all get disturbed so patient becomes *Hataprabha* (lusterless) and *Ruksata* appears<sup>7</sup>.

Dyspnea on exertion or *Shwasa* in *Pandu* is due to lack of proper nourishment and *Raktalpata* due to which Respiratory organs must work quickly to provide rapid blood flow to body tissues and that is the reason of *Shwasa*.

Due to decrease *Ranjak Pitta*& increase *Drava guna of Pitta*, *Aruchi* occurs. In other words, due to *Aruchi*, malnutrition happens consequently and then *Panduta*. *Vaigunyaprapta pittadosha* goes to the *mamsa dhatu*, which causes *Pindikodweshtana*. In Modern point of view, due to decrease oxygen delivery to the muscle, cramps are seen in anemia.

*Panduta*, *Daurbalyata*, *Hridspandanam*, *Bhrama*, *Rukshata*, *Shwasa*, *Aruchi*, *Pindikodwestana* have been relieved after treatment in complain to before treatment and are 37.8%, 45.3%, 34.9%, 33.3%, 41%, 24.9%, 38.2% & 24% respectively where the 'p' value is <0.01 (Highly Significant), <0.01 (Highly Significant), <0.02 (significant), <0.02 (significant), <0.05 (significant), <0.05 (significant), <0.02 (significant), <0.02 (significant) respectively. Hb % improved after treatment in respect to before treatment is 21.6 % where the 'p' value is <0.01(Highly Significant).

Patients who were treated with *TaramandoorGuda* showed 'Moderate' effect probably due to the presence of *Triphala*, *Trikatu*, *Chavya*, *Chitraka* etc. which stimulates the gastric mucosa & produces maximum level of *pachakagni*, *Vidanga* and *Gomutra* are potent enough to eradicate *Krimi* (worm manifestations) *Mandoorbhasma* and *Guda* are the iron sources in the drug and moreover *Mandoorbhasma* which is in the purest and simplest form was potent enough to cure *Pandu*.

## CONCLUSION

*Taramandoor Guda* was subjected to a clinical study on patients suffering from IDA. It contains *Gomutra*, iron in the form of *MandoorBhasma* and herbal ingredients are *Triphala*, *Trikatu*, *Chavya*, *Chitraka*, *Vidanga* and *Guda*. Herbal ingredients present in the

trial drug increased the bioavailability of iron. Hematinic action of *Taramandoor Guda* was due to the presence of iron contents of good bioavailability. The present clinical study clearly indicates that the herbomineral formulation *Taramandoor Guda* is an effective, well-tolerated, and clinically safe formulation in the management of IDA.

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