



Research Article

CLINICAL STUDY TO EVALUATE THE EFFICACY OF TARAMANDURA GUDA IN THE MANAGEMENT OF PANDU ROGA W.S.R TO IRON DEFICIENCY ANAEMIA

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ABSTRACT

Humans are the most ingenious and striving living beings on the earth. Because of this, humans are deliberately realising the endless heights in science and technology. In such situations, in order to adjust themselves every person is compelled to make his life fast and mechanical. All these factors contribute and in turn lead to create very common and well known disease Anaemia and specifically iron deficiency anaemia (IDA) and in *Ayurveda* iron deficiency anaemia can be correlated with the *Panduroga*. *Panduroga* is one of the diseases mentioned in *Ayurveda* characterized by the whitish discolouration of the skin due to the loss of blood. The incidence of the problem is high in school going children, adolescents and pregnant women. This study includes Clinical study on management of *pandu roga* by on the basis of *Gandha Guna Samanya*. The modern management of anaemia is mainly oral and parental therapy for correcting iron deficiency. This in spite of many advantages still remains unsatisfactory. Oral therapy can cause nausea, abdominal discomfort, diarrhea, and constipation are the side effects and it almost turns stool in to black, which is harmless side effect. The adverse effect of parental therapy includes hypersensitive reactions, haemolysis, hypotension, circulatory collapse, and vomiting and muscle pain. Blood transfusion, which is said as emergency treatment, can raise Hb up to 1 gm with a single unit. Thus it is important to search a safer, cost effective therapy, which could be explored from the *Taramandura Guda*. After considering the above facts *Taramandura Guda* and its effect on *pandu roga* has been selected for research work.

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INTRODUCTION

Pandu roga is a most common disease physicians come across in day to day clinical practice. *Pandu roga* is a *pitta pradana vyadhi* in which *rasa dhatu* and *rakta dhatu* are mainly involved. *Rasa dhatu* is considered to be *tarpanakarka* and *pushtikarka* for *rakta dhatu* (Sushrrut Samhita et al., 2004).

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On the basis of *samprapti*, these *dhatu*s are not going to nourish due to much intake of *pitta prakopaka ahara, viahara*. The vitiated *doshas* advances to *sthanasamshraya* and lodges between *twak* and *mamsa* causing *pandu, harita*, and *haridra varna* to the skin. Hence, the disease is named as *pandu roga*. *Pandu roga* is of five types *Vataj, Pittaj, Kaphaj, Sanipataj* and *Mridikabhakshanjaya pandu* (Charak, 2007). Among the three *doshas Vata, Pitta, Kapha*; *pitta dosha* is responsible for the conversion of food into heat, tissues and, waste materials and produces symptoms like *Dourbalya, Vaivarnya, Pindikodweshatana, Aruchi, Arohanayasa* and

Jwara etc. *Panduta* is *ptatyatma lakshana* of *pandu roga* and *so alpa rakto alpa medasko* is also said for it. Anemia is one of the universal problem and there are different types of anemia explained. Iron deficiency anemia is a disease that has similar paleness, symptoms, aetiology and pathogenesis. Iron deficiency anemia has a very high incidence affecting approximately 20% of the world's population. Nearly 50% of the individual with iron deficiency progress to iron deficiency anemia. According to WHO, 50% of children and women and 25% of men in developing countries like India are suffering from Iron Deficiency Anaemia. In India also, 40% adult females, 30% adult males, 80% pregnant woman and 60% children suffer from it. It reduces the work capacity of individuals and bring serious economic consequences and obstacles to the National Development. Dyspnoea, anorexia, fatigue, palpitations headache, pallor of skin etc are the various signs and symptoms of Anaemia. There are about 211 clinical studies recorded on *pandu* across various postgraduate institutions in India. Review suggests that majority of work contains herbomineral preparations to combat this condition. So the study was taken to evaluate the efficacy of *Taramandura Guda* in *pandu* among women of reproductive age group.

Research Approach

The aim of study was to evaluate the clinical efficacy of *Taramandura Guda* in *pandu* among female patients of reproductive age group 5- 60 years.

Sample Size

60 patients were selected for a single group who had satisfied in inclusion criteria.

Aims and objectives of the study

To study the efficacy of *Taramandura Guda* in the management of *Pandu roga* (Anaemia)

MATERIALS AND METHODS

In present study "Clinical study to evaluate the efficacy of *Taramandura Guda* in the management of *pandu roga* w.s.r to iron deficiency anaemia" was carried out on 60 patients attending the OPD & IPD of Saint Sahara Ayurvedic medical college, kotshamir, Bathinda, Punjab. Diagnosis was done on the basis of signs and symptoms of *panduroga* iron deficiency anemia. Investigations of blood, urine and stool have been carried out to diagnosis and to rule out any other pathology. A simple random sampling method was followed for the clinical study.

Inclusion Criteria

- Patients of both sex between the age group of 5 to 60 years
- Patients presenting with classical signs and symptoms of Anaemia,
- Patients having the Hb% in between 6 to 11 gm/ dl.

Exclusion Criteria

- Hemoglobin percentage below 8gm%

- Pregnancy induced complications like hyperemesis gravidarum, antepartum haemorrhage, pre-eclamptic toxemia, eclampsia, diabetes mellitus, and jaundice.
- Anemia due to other pathology like cardiac, renal, liver disorders, diabetes mellitus, hypertension, thalassaemia, sickle cell anemia, rheumatoid arthritis, worm infestation, acute and chronic blood loss, bleeding disorders hemoglobinopathies and malignancy, and defective absorption like patients of gastrectomy, gastrojejunostomy, sprue syndrome etc.

Parameters of the study

Subjective parameters

As the disease is characterized by the changes in the colour (*Pandutwa*) 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 conjunctiva without the presence of change in colour in the skin and end organs
- 2 – Presence of pale conjunctiva, changes in the skin colour, dryness and brittle nails.
- 3 – Presence of the above symptoms along with symptoms like dyspnoea, weakness and giddiness.

Objective parameters

Hb%, T.L.C., D.L.C., E.S.R., Stool examination (If necessary), Urine examination (If necessary)

Method of observation

The progress of the patients is observed and recorded accordingly after every 15 days. This process is followed for duration of 60 days. After the completion of the duration, the results are assessed based on the observations

Criteria for assessment of patients

Hb level below 10 gm % was kept as main diagnostic criteria for the selection of patients. The patients taken for the study were assessed for the subjective and objective parameters before and after the treatment and the parameters were graded as follows for the statistical convenience.

Selection of drug: The trial drugs were collected from the market after proper identification.

Preparation of medicine: *Taramandura guda* ingredients

Method: The above mentioned herbal drugs were shade dried and powdered individually and then they are mixed along with the *Mandura bhasma* to form a uniform mixture. They are made in to packets of 2 gms each.

Dosage

Dosage was fixed according to age and weight of the patients, where as the advised dose of *Taramandura Guda* is 500 mgs twice daily

Time of administration

Morning and evening after principle meal

Anupana

Dugdha (milk)

Duration of treatment

60 days

Rationality for the usage of the drugs

Taramandura Guda is indicated in the Ayurvedic texts for the disease *Pandu roga* and it also invigorates the haematinic centres of the body i.e., the liver and the spleen. Drugs like chitrak, shunti, maricha, pappali act to improve the digestive power (deepana) and amapachana and increases the appetite.

Assessment of the total efficacy of the therapy**Response of Subjective parameters**

- **Marked response:** 80-100% relief in the symptoms.
- **Moderate response:** 60-80% relief in the symptoms.
- **Mild response:** 40-60% relief in the Symptoms.
- **Unchanged:** Below 40 % relief.

Laboratory Investigations

- **Marked Response:** Increase of Hb% above 3gm%
- **Moderate response:** Increase of Hb% between 2-3 gm%
- **Mild Response:** Increase of Hb% between 1-2 gm%
- **Unchanged:** Below 1% increase in Hb%

Observations and Results

From the study, the following observations were noted

RESULTS**Table 1. Ingredients of Taramandura Guda**

Sanskrit names	Latin names	Quantity
Vidanga	Embelia Ribes	1 part
Chavya	Piper Chaba	1 part
Chitraka	Plumbago zeylanica	1 part
Haritaki	Terminalia chebula	1 part
Amlaki	Terminalia bellerica	1 part
Shunti	Zingiber officinale	1 part
Maricha	Piper nigrum	1 part
Pappali	Piper longum	1 part
Mandura bhasms	-----	9 part
Gomutra	-----	18 part
Guda	-----	9 part

Table 2. Age wise distribution of patients

Age in years	No. Of patients	Percentage
5-10	4	6.7
11-20	12	19.98
21-30	14	23.3
31-40	12	19.98
41-50	12	19.98
51-60	6	9.99

Table 3. Sex wise distribution of patients

SEX	NO. OF PATIENTS	PERCENTAGE
MALE	28	46.67%
FEMALE	32	53.33%

Table 5. Diet wise distribution of patients

DIET	NO. OF PATIENTS	PERCENTAGE
VEGETRAIN	28	46.67%
MIXED	32	53.33%

Table 6. Doshas wise distribution of patients

DOSHA	NO. OF PATIENTS	PERCENTAGE
VATA	30	50%
PITTA	10	16.67%
KAPHA	20	33.33%

Table 7. Prakruti wise distribution of the patients

PRAKRUTI	NO OF PATIENTS	PERCENTAGE
VATA	22	36.7%
PITTA	18	30%
KAPHA	20	33.33%

Table 8. Overall effect of therapy in the subjective and objective parameters

SYMPTOMS	N	MEAN		PERCENTAGE	SD	SE	t-value	P-value
		BT	AT					
PANDUTWA	60	2.07	0.53	69.23	0.64	0.115	13.35	<0.0001
Hb%	60	8.7	11.86	8.77	1.175	0.092	18.66	<0.0001

Table 9. Over All Effect of Therapy

RESULTS	NO. OF PATIENTS	PERCENTAGE
MARKED	24	40%
MODERATE	14	23.33%
MILD	12	20%
UNCHANGED	10	16.67%

DISCUSSION

Pandu roga is a characterized by the paleness and whitish discoloration of the skin because of the decreased blood. This occurs because of poor nutrition and deficiency of iron and folate. This occurs mostly in the school children, adolescents and pregnant women which is also proved in the present study which showed 23.33% of the affected in the age group of 21-30 years followed by the patients in the age groups 11-20, 31-40 and 41-50 (16.66% each). Female are slightly more affected than the males. From the results of the subjective and objective parameters it was observed that out of the 60 patients, it was found that the subjective parameter i.e. pandutwa was reduced considerably in all the patients with the p value <0.0001 and the change in the Hb% also showed significant result with the p value <0.0001 based on the paired 't' test. Overall effect of the therapy showed that there was a marked relief in 24 patients (40%), moderate relief in 14 patients (23.33%), mild relief in 12 patients (20%) and unchanged in 10 patients (16.67%). The significance of the results are due to the drugs like Mandura bhasma, vidanga, hatitaki, amlaki etc acts to stimulate the haematinic centres like Liver and spleen increasing the blood levels and decreases the disease *Pandu roga*.

Effect of treatment on objective parameter

In the present study all the cases were examined for Hb gm% before treatment and after the treatment. After treatment, trial drug was found to be effective in increasing the Hb gms %, and statistically analysis was carried out, effect of drug was highly significant for this investigation.

Conclusion

Pandu Roga is a *Pitta Pradhana Vyadhi* and since *Pitta* is responsible for normal colour of the body, so, if it gets vitiated, impairment of colour and complexion (*Panduta*) occurs. Thus from the study it can be concluded that *Taramandura Guda* can be used for the management of the *Pandu roga*. But as the sample size is small because of the limitations in the study, the same study may be conducted in large number of samples to prove its efficacy.

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