

## CLINICAL STUDY TO EVALUATE THE EFFICACY OF DHATRI LAUHA IN THE MANAGEMENT OF PANDU ROGA w.s.r TO IRON DEFICIENCY ANAEMIA

Trivedi Atal Bihari<sup>1</sup>, Mahajan Nitin<sup>2</sup>, Gupta Monika<sup>3</sup>, Soan Rozy<sup>4</sup>

<sup>1</sup> Associate Prof. H.O.D. P.G., <sup>2</sup> Asstt.Prof. P.G., <sup>3</sup> Asstt.Prof.P.G., <sup>4</sup>P.G.Scholar  
Deptt. Of Kayachikitsa J.I.A.R, Jammu, India

### ABSTRACT

In this 21<sup>st</sup> century, life style has changed very rapidly. As life style is changing in the society, diet, habits, are also changing very rapidly. Now-a-days people take fast food regularly; moreover they show negligence in taking care of their health. As a result of this, people suffer from various diseases. Among these diseases “PANDU ROGA” is a very common disease, seen especially in developing countries like India. The management of Anaemia includes various oral iron preparations, but these oral iron preparations have various side effects like nausea, vomiting, diarrhoea, constipation, metallic taste etc. These further deteriorate the health of the patient due to alteration in the intestinal flora. Ayurveda has lots to offer for the treatment of *Pandu Roga*. Out of several herbal and herbomineral preparations mentioned in *Ayurvedic* classics, *Dhatri lauha* was selected for my dissertation work. For this purpose total 30 patients were registered. The patients were assessed on subjective and haematological parameters for obtaining the effect of the drug. All clinical signs and symptoms were assessed on the basis of scoring given to them. Duration of clinical trial was of two months and all the patients were regularly followed up twice in a month to evaluate the therapeutic effect of the trial drugs.

**Keywords:** Iron Deficiency Anaemia, *Pandu Roga*, *Dhatri lauha*.

### INTRODUCTION

In today's changing world, “While the poor are not able to afford a good diet, and the rich due to their fondness for junk food, do not eat a balanced diet.” Thus, malnutrition either due to inadequate dietary intake or lack of balanced diet and population explosion has led to the development of various diseases and *Pandu Roga* is one such disease.

*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, disease characterised by *Pandu Varna* due to significant deficiency of *Rakta Dhatu* is known as *Pandu Roga*. Due to *Nidanas* like excessive intake of *Kshariya*, *Amla*, *Lavana*, *Ushna*, *Viruddhahara*, *Asatmya Bhojana*, *Divaswapna* and *Vegavrodha*,

all the three *Doshas* especially *Pitta Dosh* gets aggravated which in turn vitiates *Kapha*, *Vayu*, *Rakta*, *Twaka*, *Mamsa* and *Ojas* and produces yellowish discolouration (*Panduta*) of the skin as a result of which *Pandu Roga* occurs. The nearest correlation of Iron Deficiency Anaemia can be made with *Pandu Roga* in Ayurveda.

According to *WHO*, 50% of children and women and 25% of men in developing countries like India are suffering from Iron Deficiency Anaemia. 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.

#### **Aims and Objectives of the study**

- Conceptual study of *Pandu Roga* vis-à-vis Iron-Deficiency Anaemia.
- To clinically evaluate therapeutic effects of *Dhatri Lauha* in the management of *Pandu Roga* w. s .r. to Iron-Deficiency Anaemia.

#### **MATERIALS AND METHODS**

##### **➤ Selection of case**

Patients were selected from JIAR, Jammu.

##### **➤ Inclusion Criteria :**

- ❖ Patients having Haemoglobin concentration between 6-10gm%
- ❖ Patients having classical signs and symptoms of *Pandu Roga* as mentioned in Ayurvedic texts like *Panduta*, *Daurbalya*, *Aruchi*, *Mandagni*, *Shrama Shwasa*.
- ❖ Age group – 20-60 yrs.

##### **➤ Exclusion criteria**

- ❖ Patients having Haemoglobin concentration below 6gm%.
- ❖ Age below 20 years and more than 60 years.
- ❖ Patients suffering from following disorders: Pernicious Anaemia, Megaloblastic Anaemia , Aplastic Anaemia, Haemolytic Anaemia, Leukaemia, Anaemia due to menstrual disorders, worm manifestations Tuberculosis, diabetes, sprue and other systemic diseases, Patient who had gastrectomy.

##### **➤ Criteria of Assessment**

For evaluating the efficacy of drugs, following parameters were adopted before and after the completion of clinical trial.

##### **➤ Clinical Assessment:**

- ❖ Improvement in the signs and symptoms of *Pandu Roga* as per Ayurvedic classics.

*Panduta*, *Daurbalya*, *Aruchi*, *Mandagni*, *Shrama Shwasa*.

- ❖ Improvement in the general health of the patients and increased feeling of well being.

##### **➤ Laboratory Investigations:**

Haemoglobin concentration (Hb) , Reticulocyte count, E.S.R.( Erythrocyte Sedimentation Rate), PBF (Peripheral Blood film), PCV (Packed Cell Volume), MCV (Mean Corpuscular Volume), MCH (Mean Corpuscular Haemoglobin), MCHC (Mean Corpuscular Haemoglobin Concentration).

#### **MATERIALS**

Materials (Drugs) used in the research work are:

***DHATRI LAUHA*<sup>1</sup>**

➤ **Ingredients of Dhatri Lauha** : Amalaki, Haridra, Pippali, Shunthi, Maricha, Shudha Lauha Bhasma.

➤ **Method of preparation:** All the drugs were taken in equal quantity, impurities were extracted and drugs were reduced into a fine powder.

➤ **Administration of the Drug:** The patients fulfilling the criteria for clinical trial were selected administration of drug.

**Single Group:** 30 patients of Pandu Roga were given Dhatri Lauha 500 mg BD with luke warm water after meals.

**Table No.1**

S.No.	GROUP	DRUG	DOSE	ANUPANA
1	Single	Dhatri Lauha	500 mg BD (Orally)	Luke warm Water

**Duration of Trial and Follow up:**

Duration of clinical trial was of two months and all the patients were regularly followed up twice in a month to evaluate the therapeutic effect of the drug.

**OBSERVATIONS AND RESULTS**

**Table no 2 : EFFECT OF DHATRI LAUHA ON SUBJECTIVE PARAMETERS**

SYMPTOMS	MEAN		MEAN DIFF.	% RELIEF	S.D.	S.E.	t value	P value
	BT	AT						
<i>Panduta</i>	1.93	0.73	1.2	62.06%	0.40	0.074	17.1	<0.001
<i>Daurbalya</i>	1.83	0.76	1.06	58.18%	0.36	0.06	17.6	<0.001
<i>Aruchi</i>	1.3	0.5	0.8	61%	0.48	0.08	10	<0.001
<i>Mandagni</i>	1.73	0.73	1	57.69%	0.37	0.06	16.6	<0.001
<i>Shrama/ Shwasa</i>	<b>1.83</b>	<b>0.83</b>	<b>1</b>	<b>54.54%</b>	<b>0.41</b>	<b>0.07</b>	<b>14.2</b>	<b>&lt;0.001</b>

**Table no 3: EFFECT OF DHATRI LAUHA ON OBJECTIVE PARAMETERS**

	MEAN		MEAN DIFF.	% RELIEF	S.D.	S.E.	t value	P value
	BT	AT						
<b>Hb</b>	7.3	11.1	3.9	56.1%	1.25	0.23	15.2	<0.001
<b>RETICULOCYTE COUNT</b>	0.78	1.13	0.35	44.8%	0.49	0.08	6.62	<0.001
<b>ESR</b>	17	11.2	5.8	51.7%	6.1	1.12	7.08	<0.001
<b>PBF</b>	1.5	0.7	0.8	53.1%	0.82	0.15	5.3	<0.001
<b>PCV</b>	29.4	42.1	12.7	43%	4.07	0.75	16	<0.001
<b>MCV</b>	62.1	94.7	32.6	52.4%	15	2.7	11.2	<0.001
<b>MCH</b>	19.1	28.2	9.1	50.7%	2.5	0.46	16.1	<0.001
<b>MCHC</b>	<b>25.3</b>	<b>36.9</b>	<b>11.6</b>	<b>52.1%</b>	<b>6.0</b>	<b>1.1</b>	<b>10.8</b>	<b>&lt;0.001</b>

**PROBABLE MODE OF ACTION OF DRUGS**

Dhatri Lauha is one of the most effective classical drugs. It is a herbomineral

compound indicated for the management of Pandu Roga.

The contents of Dhatri Lauha and their mode of action are

S.NO.	INGREDIENT	MODE OF ACTION
1	Amalaki	Rasayana, Tridoshajit, Vrishya, Balya
2	Haridra	Krimighna, Raktavardhaka, kaphara
3	Shunhti	Srotoshodhana, Agnideepana, Anulomana
4	Maricha	Krimighna, Srotoshodhana, Agnideepana
5	Pippali	Rasayana, Srotoshodhana, Agnideepana
6	Shudh Lauha bhasma	Rasayana, Raktavardhak, Yogavahi

Action of a medicine mainly depends upon its subtle constituents like Rasa, Guna, Virya, Vipaka and Prabhava etc.

- Amalaki being the main ingredient of Dhatri lauha possesses Pitta pradhana tridosha shamaka action which could be considered as the most desired action of a drug in a Pitta pradhana tridoshaja vyadhi like Pandu. Thus the drug directly acts on the major dosha involved in the samprapti of Pandu, bringing about shamana of the prakupita doshas.
- Maximum drugs in Dhatri Lauha i.e. Shunthi, Maricha Pippali have katu rasa and are srotoshodhaka, so they clear the obstruction in Srotasa and assist in Samprapti Vighatana of Pandu Roga. Moreover Deepana, Pachana and vatanulomaka properties of Maricha and Pippali improves digestion and also reduces ama uttpatti. This counteracts poor digestion found in Pandu Roga.
- Most of the ingredients have Katu and Madhura Vipaka, Katu Vipaka increases the metabolism and Madhura Vipaka does the Dhatu Poshana and increases the vital strength.

- Pippali is Yakrituttejaka, acts on yakrit and pleeha (the moola sthana of ranjaka pitta, which does the rasa ranjana), thereby proper rasa dhatu formation occurs.
- Haridra and Lauha bhasma have raktavardhaka properties, so they directly increases the rakta.
- Amalaki is the richest source of vitamin C. Vitamin C reduces ferric iron into ferrous and helps in producing red blood cells. Also it acts as rasayana to prevent Ojokshaya.

#### EFFECT OF DHATRI LAUHA ON SUBJECTIVE PARAMETERS

Amalaki, lauha are the main ingredient in this yoga, hence it is named Dhatri Lauha. Pippali, Maricha, Shunthi are Katu Rasa Pradhana Dravya which promote Agni by deepana and pachana properties does Ama pachana which nullify the Agnimandya, Aruchi like lakshanas of Pandu Roga. Vitiated Pitta is brought to normalcy by Madhura vipaka. Pramathya property of Maricha helps in clearing of srotavorodha. Haridra acts as krimighna and Lauha bhasma directly increases the Rakta Dhatu. Regarding Daurbalya, Pippali and Amalaki both are Rasayana and Balya. It nourishes all the Dhatus by proper

digestion and absorption of *Ahara Rasa*. *Uttrotara Dhatu poshana* is improved by the *dravyas*, helpful in reducing *Shrama/Shwasa*.

### EFFECT OF DHATRI LAUHA ON OBJECTIVE PARAMETER

*Pippali* being bioavailable drug, enhances absorption and systemic utilisation of the nutrients. *Dhatri Lauha* showed highly significant results in correcting MCV, the insufficiency of iron slows the process of red blood cell production. When more iron is absorbed it helps in the production of normal erythrocytes. *Amalaki* possesses highest level of vitamin C, enhances iron absorption. *Krimighna* property of *Maricha* and *Pippali* controls the concurrent parasitic infection in Iron Deficiency Anaemia, eliminating one of the major etiology.

*Dhatri Lauha* does the correction of disproportionate reduction of red cell haemoglobin, hence showed highly significant results in MCH.

It also showed highly significant result by improving Haemoglobin Concentration in Red Blood cell which implies that regeneration of constituents of blood also is being taken care of.

### SUMMARY AND 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. *Dhatri Lauha* (a herbomineral drug) has proved to be quite effective in the treatment of *Pandu Roga*. The drug effectively reduced the signs and symptoms of *Pandu Roga* as well as provided highly significant results in haematological

parameters without involving undesirable side effects

**“Thus, it may be concluded that *Dhatri Lauha* is a potent remedy in the management of *Pandu Roga* w.s.r. Iron Deficiency Anaemia”.**

### REFERENCES

1. Bhaisajya Ratnawali 12/30
2. Dr. Sharma R.K. & Vaidya Dash Bhagwan, Charaka Samhita, Chowkhambha Sanskrit Series office, Varanasi, Edition 2004.
3. Dr. Sharma R.K and Vaidya Das Bhagwan, CharakSamhita, Choukhambha Sanskrit, Edition 2004.
4. Acharya Trikamji Jadavji, Sushruta Samhita with nibandhsangrah commentary of shri Dalhanacharya, Choukhambha orientalia, Varanasi, Edition 2005.
5. Sharma P.V. - DravyaGunaVigyana, Vol. I & II, Choukhambha Bharati Academy, Varanasi, Edition 2000.
6. Shastri Ambikadutta Kaviraja, Sushruta samhita with Ayurveda Tattva Sandipika, Chowkhambha Sanskrit Sansthan, Varanasi. Seventeenth Edition 2003.
7. Prof. Singh Ramaharsha, KayaChikitsa, Chowkhambha Sanskrit Pratishthan Delhi. Edition 2004.
8. Davidson's Principles and practice of Medicine, By Sir Stanley Davidson, Published by Churchill Livingstone, Elsevier. 20<sup>th</sup> Edition, 2006.
9. Mohan Harsh, Text Book of Pathology, Jaypee Brothers Medical publishers (p) Ltd., New Delhi. Fifth Edition 2005.

10. Mehta J. P., Practical Medicine, National book Depot, 18<sup>th</sup> Edition, 2008.
11. Stanley Davidson Sir, Davidson's Principles & Practice of Medicine, Churchill Livingstone, Elsevier, 20<sup>th</sup> Edition 2006.

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**CORRESPONDING AUTHOR**

**Dr. Trivedi Atal Bihari**

Associate Prof. H.O.D

Deptt. Of Kayachikitsa

J.I.A.R, Jammu, India

**Email:** abdratal8@gmail.com

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