ROLE OF NAVAYASA LAUHA IN THE MANAGEMENT OF IRON DEFICIENCY ANAEMIA

Richa Mohan

Assistant Professor, Gaur Brahmin Ayurvedic College, Rohtak, Haryana, India

ABSTRACT

A good health has been corner stone of a happy human existence. Human being can live in happiness without many earthly possess but not without good health. Therefore from the very beginning of universe it has always been intention of human being to search for various methods to keep himself healthy and away from the diseases. In young children, iron deficiency is due to increased iron requirement during periods of rapid growth, which are almost 10 times higher per kilogram of body weight than that of an adult male. In addition, infant and toddler diets are often poor in bio-available iron, particularly post weaning. *Panduroga* is described with minute details in Ayurvedic texts like Charak Samhita, Sushruta Samhita, Ashtanga Hridaya, etc. As per Ayurveda science, *Panduroga* is *Rasapradoshaj vikara* and *Rakta dhatu kshaya* is the common symptom according to Charaka. Signs and symptoms such as *Panduta, daurbalya*, *hridspandanadhikya, akshikuta shotha*, etc. are so often observed in such patients that clinical features in combination are considered the cardinal features of *Panduroga.*

Key words: *Pandu*, anaemia, *daurbalya, hridspandanadhikya, akshikuta shotha ,Panduta*

INTRODUCTION

Ayurveda is a preventive medical science and it has curative property too. In the third world countries like India a large majority of people suffer from malnutrition, many nutritional deficiency diseases like anaemia which is described in Ayurveda as *Pandu roga*.

Panduroga is termed as anaemia in modern medicine. Anaemia is defined as the concentration of hemoglobin in blood which is below the lower limit of the normal range for the age and sex of individual. The main reason for deterioration for quality of blood is due to deficiency of iron & vitamins in the diet of the person. Many people have anaemia without

knowing it. It is usually diagnosed when the symptoms become acute; hence it is necessary to consume a well balanced diet that provides all nutrients especially iron. Thus keeping in view the importance of blood in human life it is need of the hour to work to overcome these problem faced by the community.

Iron deficiency anaemia is a condition where lack of iron in the body leads to a reduction in the number of red blood cells. Iron is used to produce red blood cells, which help, store and carry oxygen in the blood. If you have fewer red blood cells than normal, organs and tissues won't get as much oxygen as they usually would[1]. There are several differ-

ent types of anaemia, and each one has a different cause. Iron deficiency anaemia is the most common type. Other types of anaemia can be caused by a lack of vitamin B12 or folate in the body their immunity also decreases. In Ayurveda we can describe this as "*Rakta dhatu Kshaya*".

Parameters of Study:
Aims and objectives:
1. To screen out the patients suffering from anemia on the basis of signs and symptoms
2. To provide the drug to the patients
3. To study the effect of the drug in treating anemia
4. To study the side effects, if any

Subjective Parameters:
Panduta (pallor), *shrama* (fatigue), *bhrama* (vertigo), *pindikoudveshtana* (calf muscle pain), *daurbalya* (general weakness), *ayasaja shwasa* (exertional dyspnoea), Objective parameters: Hb%, PCV, MCV, RBC, etc

Assessment criteria: Patients were assessed based on their clinical history and their physical observation of the body as per the performa. All the parameters were recorded properly in performa and the result of the study was measured on the foundation of development in signs and symptoms of the diseases.

1. Changes in subjective parameters.

2. Changes in objective parameters which are recorded in the following pattern
- Marked relief – above 75% improvement
- Moderate relief – 25-75% improvement
- No relief – below 25% improvement

Explanation of grades: The grades and grade points were given to the different clinical parameters and laboratory findings for the determination of statistical assessment of results.

Grade Features

0 No symptoms/ No observable clinical features
1 Mild symptoms
2 Moderate symptoms
3 Severe symptoms

Adverse reaction: Patients finding any adverse effect of drug after treatment were recorded and analyzed as per the performa.

Analysis of data: All the observation of patients were recorded and documented properly in Case Report Form. They were analyzed by using statistical methods like student's t-test, p-test, standard deviation etc to establish the efficacy.

NAVAYAS LOHA VATI[2]
Chark chikitsa 16/70-71
Yoga ratnakar pandu rogachikitsa 7-9
It contains the following drugs:-

1. *Haritaki*	1 Part.
2. *Amalaki*	1 Part.
3. *Bibhitaki*	1 Part.
4. *Shunthi*	1 Part.
5. *Maricha*	1 Part.
6. *Pippali*	1 Part.
7. *Vidang*	1 Part.
8. Chitrak*a*	1 *Part.*
9. *Musta*	1 Part.
10. *Lauhabhasma*	9 Part.

THE PROPERTIES OF DRAVYAS OF "NAVAYAS LOHA[6]

Sr. No	Drug	Rasa	Guna	Vipak	Virya	Doshaghnat	Karma	Rogaghnata
01	Sunthi (Zingiber Officinale)	Katu	Laghu, Snigdha	Madhura	Ushna	Kaphavatas hamaka	Shitprashamana, Shothahara, Truptighna, Dipana,Rochana, Pachana, Raktashodhaka, Amapachana etc.	Amavata, Shaitya, Shotha, Aruchi, Agnimandya, Arsha, Hriddaurbalya, Shitapitta, Jwara, Daurbalya etc.
02	Maricha (Piper nigrum)	Katu	Laghu, Tikshna	Katu	Ushna	Vatakaphas hamaka	Raktotkleshaka,Lekhana,Aartavjanana, Yakrututtejak,,Dipana, Balya, Pachana, Krimighna etc.	Shotha, Shoola, Agnimandhya, Ajirna, Kushtha, Yakrutvikar, Krimi, Hriddaurbalya, Rajorodha, Shitjwara etc.
03	Pippali (Piper Longum)	Katu	Laghu Snigdha, Tikshna	Madhura	Anushnashita	Kaphavatas hamaka	Raktotkleshaka, Jantughna, Dipana Raktashodhaka,Raktavardhak, Krimighna, Yakrututtejak,Truptighna etc.	Aruchi, Agnimandya, Ajirna Vibandha, Arsha, Yakrutvikar, Plihavridhi, Krimiroga, Pandu, Hriddaurbalya, Raktavikar, Jwara, Kushtha, Daurbalya, etc.
04	Vidanga (Embeli ribes)	Katu	Laghu Ruksha, Tikshna	Katu	Ushna	Kaphavatas hamaka	Krimighna, Dipana, Pachana, Rakta Shodhaka, Varniya, Anulomana etc.	Krimiroga, Krimidanta, Kushtha, Raktavikar, Ajirna, Kamala, Daurbalya, Agnimandya etc.
05	Chitrak (Plumbago Zeylanica)	Katu	Laghu Ruksha, Tikshna	Katu	Ushna	Kaphavatas hamaka	Krimighna,Dipana, Pachana, Rakta Shodhaka, Varniya, Anulomana etc.	Shotha, Ajirna, Agnimandya, Yakrutvikar, Daurbalya, Dipana, Pachana, Krimi, Arsha, Kushtha, Rajorodha, Jwara, Shvitra etc.

06	Musta (Cyprus rotundus)	Tikta Katu, Kashaya	Laghu Ruksha,	Katu	Shita	Kapha-vatas hamaka	Dipana, Pachana, Grahi, Trishnanighrahana and Krimighna, Raktaprasadak, Kaphaghna, Mutral, Jwaraghna, Balya, Twakdoshahara, etc.	Aruchi, Churdi, Agnimandya, Ajirna, Sangrahani, Trishna, Krimi, Kasa, Shwas, Mutrakricheha, Sutikaroga, Sthanya-vikara.
07	Haritaki (Terminalia-chebula)	Pancharasa (Lavana Varjita) Kasaya Pradhan	Laghu, Ruksha	Madhura	Ushna	Tridoshahara (mainly Vata-shamaka)	Deepana, Rasayana, Medhya Chakshushya Anulomona, Yakrit,Uttejaka, Krimighna, Shothahara, Shonitasthapana etc.	Kushtha, Gulma, Udavarta, Shotha, Pandu, Arsha, Shwasa, Kasa, Prameha, Krimi, Udara, Kamala, etc.
08	Bibhitaka (Terminalia Bellerica)	Kashaya	Laghu, Ruksha	Madhura	Ushna	Tridoshahara (Mainly Kaphhara)	Shothahara, Vedana Sthapana, Raktasthambhana Keshya, Bhedaniya, Dhatuvardhak etc.	Kasa, Krimi, Ashmari, Swarbhanga, Trishna, Chardi, Bronchitis, Pandu, Shvitra etc.
09	Amalaki (Emblica Officinalis)	Pancharasa (Lavana Varjita) Amla Pradhan	Laghu, Ruksha	Madhura	Shita	Tridoshahara (Mainly Pittashamaka)	Dahaprashamana, Chakshushya, Rasayana, Vrishya, Dipana, Yakrututtejak etc.	Raktapitta, Pandu,Vatarakta, Bhrama Kamala,Prameha,Jwara, Kushtha,Disorders of digestive system etc

Dose: The formulation will be prepared as per the instructions in classical texts of the reference, in the form of *Vati* each of 500 mg. The patients were advised to take 1tablet once a day with water.

Duration: 1month.

INCLUSION CRITERIA:

- Patients with classical features *panduta* (pallor), *shrama* (fatigue), *bhrama (*vertigo), *pindikoudveshtana* (calf muscle pain), *daurbalya* (general weakness), *ayasaja shwasa* (exertional dyspnoea), of iron deficiency anaemia.
- Patients of either sex of age group 18-60 years.
- Patients with Hb% within the range of 7-11gm/dl

EXCLUSION CRITERIA:

- Patients with chronic illness.
- Patients with history of all types of diabetes mellitus and hypertension.
- Patients with history of congenital disorders related with haemopoetic system.

- Patients suffering from disorder associated with gastro intestinal bleeding.
- Pregnant and lactating women.

MATERIAL & METHODS:

Selection of Patients

For the present project patients from OPD of government Ayurvedic hospitals and dispensaries will be selected. Only those patients having *pandu* as an independent disease and not as *purvarupa, rupa* or *upadrava* will be taken into consideration, patient will be drawn by random sampling technique, irrespective of age, sex, caste, religion and profession. They will be advised to visit the hospital every week for regular check up and to assess the effect.

Follow up will be done in between after 1 month along with laboratory investigations.

Criteria for Diagnosis

At the onset clinical history will be taken along with the physical examination of each patient will be done. Hb level below 10gm % will also kept as main diagnostic criteria for the selection of patients. Other necessary investigations will be carried out to exclude other pathologies as well as for the assessment of present health status of patients

DISCUSSION

Pandu roga is a prevalent disease of the nation. *Navayas lauh* is a herbo mineral preparation which can be given to children, young and old persons so clinical study was done to evaluate the effect of the drug in which significant effect was found in the clinical parameters and symptoms of anaemia.

CONCLUSION

From the above clinical studies and references of Ayurvedic classical texts, it can be concluded that.

1. *Navayasa Lauha*, as the main drug in treating anaemia is easily available and less expensive.
2. Most *o*f the drugs in the present formulation are *deepana(appetizer) pachana (digestive), srotoshodhaka* (channelcleaner), *tridoshghana* (body humour specifier), rasaraktavardhana (one which increases blood), *rasayana* (rejuvenative, and *balya* (one which increases strength), *panduhara* (one which subsides pallor).
3. *Raktavardhaka* property is also present in *lauhabhasam*.
4. Iron is also present in *Amlaki and Musta.*
5. *Vidanga* and *vibhitki* are known *krumihara drugs* (antihelminthic activity),that can prevent anaemia because worm infestation is one of the main cause of anaemia in Indian subcontinent.
6. Presence of ascorbic acid(vitamin C) in *amla* has significant effect on iron bioavailabiltity.
7. *Musta* also contains copper and manganese which may increase iron metabolism and haemoglobin synthesis.
8. *Lauhabhasma* has significant haeminitic and haemoglobin regeneration efficiency.
9. *Navaysa Lauha* tablets are effective will tolerated and clinically safe to relieve sign and symptoms of *Pandu roga*(IDA).
10. The results of the studies provided significant effect in increasing haemoglobin percentage and improving nutrition anaemia.

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CORRESPONDING AUTHOR

Dr Richa Mohan
Assistant Professor
Gaur Brahmin Ayurvedic College
Rohtak, Haryana, India
Email: richa.ria2@gmail.com