ROLE OF NAVAYASA LAUHA IN THE MANAGEMENT OF IRON DEFICIENCY ANAEMIA

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ABSTRACT
A good health has been cornerstone 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 Panduroga.

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. 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 anaemia 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 anaemia
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
_Chark chikitsa_ 16/70-71
_Yoga ratnakar pandu rogachikitsa_ 7-9
It contains the following drugs:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1.</td>
<td><em>Haritaki</em></td>
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<tr>
<td>2.</td>
<td><em>Amalaki</em></td>
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<td>3.</td>
<td><em>Bibhitaki</em></td>
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<td>4.</td>
<td><em>Shunthi</em></td>
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<td>5.</td>
<td><em>Maricha</em></td>
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<td>6.</td>
<td><em>Pippali</em></td>
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<td>7.</td>
<td><em>Vidang</em></td>
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<td>8.</td>
<td><em>Chitraka</em></td>
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<td>9.</td>
<td><em>Musta</em></td>
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<tr>
<td>10.</td>
<td><em>Lauhabhasma</em></td>
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</tbody>
</table>
### THE PROPERTIES OF DRAVYAS OF “NAVAYAS LOHA”

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Drug</th>
<th>Rasa</th>
<th>Guna</th>
<th>Vipak</th>
<th>Virya</th>
<th>Do-shaghnat</th>
<th>Karma</th>
<th>Rogaghnata</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Sunthi (Zingiber Officinale)</td>
<td>Katu</td>
<td>Laghu, Snigda ha</td>
<td>Madhura</td>
<td>Ushna</td>
<td>Kaphavatasha</td>
<td>Shitprashamana, Shothahara, Truptighna, Dipana, Rochana, Pachana, Raktashodhaka, Amapachana etc.</td>
<td>Anavata, Shaitya, Shotha, Aruchi, Agnimandya, Arsha, Hridaurbalya, Shitapitta, Jvara, Daurbalya etc.</td>
</tr>
<tr>
<td>02</td>
<td>Maricha (Piper nigrum)</td>
<td>Katu</td>
<td>Laghu, Tiksh na</td>
<td>Katu</td>
<td>Ushna</td>
<td>Vatakaphas hamaka</td>
<td>Raktotklesha-ka, Lekhana, Aartavjana, Yakrututejak, Dipana, Balya, Pachana, Krimighna etc.</td>
<td>Shotha, Shoola, Agnimandhya, Ajirna, Kushtha, Yakrutvikar, Krimi, Hridaurbalya, Rajorodha, Shitjwara etc.</td>
</tr>
<tr>
<td>03</td>
<td>Pippali (Piper Longum)</td>
<td>Katu</td>
<td>Laghu, Snigda ha, Tiksh na</td>
<td>Madhura, Anushnashita</td>
<td>Kaphavatasha</td>
<td>Raktotklesha-ka, Jantuighna, Dipana Raktashodhaka, Rajtvardhak, Krimighna, Yakrututejak, Truptighna etc.</td>
<td>Aruchi, Agnimandya, Ajirna Vibandha, Arsha, Yakrutvikar, Plihavridhi, Krimiroga, Punda, Hridaurbalya, Raktavikar, Jvara, Kushtha, Daurbalya, etc.</td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>Vidanga (Embeli ribes)</td>
<td>Katu</td>
<td>Lageru, Ruksha, Tiksh na</td>
<td>Katu</td>
<td>Ushna</td>
<td>Kaphavatasha</td>
<td>Krimighna, Dipana, Pachana, Raktashodhaka, Varniya, Anulomana etc.</td>
<td>Krimiroga, Krimidanta, Kushtha, Raktavikar, Ajirna, Kamala, Daurbalya, Agnimandya etc.</td>
</tr>
<tr>
<td>05</td>
<td>Chitrak (Plumbago Zeylanica)</td>
<td>Katu</td>
<td>Lageru, Ruksha, Tiksh na</td>
<td>Katu</td>
<td>Ushna</td>
<td>Kaphavatasha</td>
<td>Krimighna, Dipana, Pachana, Raktashodhaka, Varniya, Anulomana etc.</td>
<td>Shotha, Ajirna, Agnimandya, Yakrutvikar, Daurbalya, Dipana, Pachana, Krimi, Arsha, Kushtha, Jvarorodha, Jvara, Shvitra etc.</td>
</tr>
</tbody>
</table>
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 1 tablet once a day with water.

Duration: 1 month.

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 7-11 gm/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 of 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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