MANAGEMENT OF PANDU ROGA WITH SPECIAL REFERENCE TO IRON DEFICIENCY ANAEMIA THROUGH AYURVEDA: A CASE STUDY

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ABSTRACT
Pandu Roga is one among them which occurs due to Dhatu Vaishamya. Pandu is described in all Ayurvedic classical texts. As the name denotes the main feature of Pandu Roga is Pandutva. According to Charaka, it is one among the Rasavaha Srotodushthi. Sushruta has mentioned it as Rakta Srotodushi. Insufficient dietary intake and improper absorption of iron are the causes of Iron Deficiency Anaemia which presents with the significant symptoms such as feeling of weakness, tiredness, and shortness of breath, palpitations, Koilonychias, tingling sensation, dysphagia and altered sensation of taste. The modern management of Iron Deficiency Anaemia is to find out and treat the underlying cause and to give iron to correct the Anaemia. The best preparation of oral iron is Ferrous Sulphate 100 mg twice daily. But this has adverse effect like nausea, constipation etc. In Ayurveda there are many single drugs as well as combinations of herb mineral drugs available for the effective management of Pandu Roga. Present study reveals that Pandu Roga can be managed successfully with Ayurvedic treatments without any side effects.


INTRODUCTION
Pandu Roga is Pitta Pradhan Vyaadi.[1] It is a disease entity described in Ayurveda which bears great resemblance to the clinical picture of Anaemia.[2] It develops due to depletion of Rasadhatu which in turn becomes ineffective in the production of Raktadhatu. In Ayurvedic classics, the description of Pandu is available in three forms i.e. Pandu as a disease, Pandu as a complication, Pandu as a sign of certain diseases. As the name denotes the main feature of Pandu Roga is Pandutva. According to Charaka, it is one among the Rasavaha Srotodushthi features. Sushruta has mentioned it as Rakta Srotodushi. Pitta Dosha vitiation is the main causative factor which in turn vitiates Vata and Kapha Dosha too. Rakta, Mamsa and Twaka are also vitiated.[3] Alparakta, Alpamedu, Ojokshaya, Shihitlenidriya and Vaivarnya of Sareera are the Pratayatma Lakshana of Pandu Roga.[4]

Anaemia is the most prevalent nutritional deficiency disorder in the world.[5] In this disease reduction of haemoglobin, number of RBCs per cumm of blood and quantity of Hb% are resulting in pallor of the skin.[6] Globally, anaemia affects 1.62 billion people, which corresponds to 24.8% of the population.[7] In India, anaemia affects an estimated 50% of the population. The problem becomes more severe as more women are affected with it as compared to men.[8] It is estimated that about 20-40% of maternal deaths in India are due to Anaemia and one in every two Indian women (56%) suffers from some form of Anaemia.[9] Anaemia has got a very high prevalence rate in the world over and in spite of the massive efforts of the modern medical science; a good control has not been achieved. New associations in the treatment module are needed to combat Anaemia more successfully.[10]

The causes of Iron Deficiency Anaemia are insufficient dietary intake and improper absorption of iron which causes symptoms such as feeling of weakness, tiredness, shortness of breath, palpitations, Koilonychia, glossitis, dysphagia and altered sensation of taste.[11,12] The modern management of Iron Deficiency Anaemia is to find out and treat the underlying cause and to give iron to correct the Anaemia. The best preparation of oral iron is Ferrous Sulphate which is given at a dose of 100 mg twice daily but this has many adverse effects like nausea, diarrhoea, dyspepsia, constipation etc.[13]

Ayurveda being holistic medicine advises that all diseases are due to malfunction of Agni (Agni mandya). If metabolism is good everything gets digested and assimilated, which is necessary for the sustaining the health. Both Ayurveda and contemporary science accepts the fact that derangement of Agni (metabolism) is the root cause of the disease. As a result of weakened Agni...
an intermediate product of metabolism called Ama is formed. This Ama causes diseases like Pandu. Pandu being a Santarpanajanya Vikara, requires Teekshna oushadhis like Loha to break the Samprapti. Contemporary science also accepts the facts that disturbed absorption along with dietary insufficiency is the root cause for Iron Deficiency Anaemia. Here is a novel approach to manage Pandu (Iron Deficiency Anaemia) without using iron as a direct supplement. Selected compound does not contain iron as direct ingredient thus averting the adverse effect of oral iron therapy.

Samprapti of pandu roga
Irregular/faulty (Pitta Prakopaka) dietary habits and lifestyle

Amla, Lavana, Katu Rasa Aitisevana, Kshara, Ushna, Tisksna, Ruksha Ahara Aitisevana

Impaired the digestion, leads to Mandagni.

Pitta Dosha is aggravated

Aggravation of Pitta causes vitiation of Rasa Dhatu

Gaurava and Shaithilya in Dhatu, and Bala,Varma, Sneha of Twaka were affected

Rasa Dhatu does not nourishes the Rakta Dhatu properly

Raktkshaya

Panda Roga

Case report
A 22 years female patient visited to Kayachikitsa OPD of our institute with chief complaints of 1) Panduta (Pallor of skin) 2) Shwasa (dyspnea) 3) Agnimanodya (Loss of appetite) 4) Daurbhalya (generalized weakness) 5) Gatrashool (bodyache) 6) Aruchi (loss of taste) 7) Pindikodveshtana (leg cramps). Patient had above complaints since 4 months.

History of present illness
According to the patient, she was asymptomatic before 4 months. Then patient started suffering from loss of appetite, body ache. Gradually increase was observed in the complaints of breathlessness, loss of taste. Patient was also having complaints of general weakness, pain in calf muscle, dizziness. She consulted an allopathic doctor and took therapy for 1 month. The problems persisted even after allopathic treatments and she visited our hospital to take Ayurveda treatment. Considering the symptoms we diagnosed it as a case of Pandu Roga.

History of past illness: No any past illness.

Personal history –
Occupation: Student.
Bad habits: No addictions Diet: Pure veg.
Family history: All family members have no history of any severe disease.

General examination
General condition of patient is moderate
Pulse- 88/min, regular BP-110/70 mm of Hg R.R. – 24 /min.
Pallor++ Weight- 35kg Height- 154cm
R/S: AE=BE Clear CVS-S1, S2 normal, no abnormal sound
CNS- conscious, oriented: place, person, time
Appetite- Loss of appetite Sleep- Normal Bowel habit- Clear
Urine- Clear Menstrual history- Scanty and regular

Treatment plan
1. Punarnava Mandura 500 mg BD with Takra.
2. Draksasava 20 ml BD with water.
3. Dadimadi Ghrita 10 ml at morning OD with water.

Total duration of therapy: 2 months.

Investigations-
1. CBC
2. ESR

OBSERVATIONS AND RESULT
Table no. 1: Subjective criteria.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subjective criteria</th>
<th>Grade</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Panduta (Pallor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No pallor</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pallor of conjunctiva</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pallor of conjunctiva, nails, tongue</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pallor of conjunctiva, nails, tongue, skin, palm and soles</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Shwasa (Dyspnea)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occasional on exertion</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Walking upstairs / quick Moving</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On bed</td>
<td>3</td>
<td></td>
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</table>
### Table No. 2: Objective criteria.

<table>
<thead>
<tr>
<th>Investigations</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb%</td>
<td>9.3 g/dl</td>
<td>11.7 g/dl</td>
</tr>
<tr>
<td>TLC (/mm³)</td>
<td>7710 mm³</td>
<td>8190 mm³</td>
</tr>
<tr>
<td>DLC (%)</td>
<td>P (60%), L (33%) E (02%), M (05), B (00%)</td>
<td>P (56%), L (31%), E (03%), M (10%), B (00%).</td>
</tr>
<tr>
<td>ESR (mm/hr)</td>
<td>47</td>
<td>23</td>
</tr>
<tr>
<td>PBF</td>
<td>RBC’s- Anisocytosis, Microcytosis Platelet- appear adequate on smear.</td>
<td>RBC’s-Normochromic, Mild microcytosis Platelet- appear adequate on smear.</td>
</tr>
<tr>
<td>RDW</td>
<td>20%</td>
<td>14%</td>
</tr>
<tr>
<td>TRBC</td>
<td>3.88 million/mm³</td>
<td>4.39 million/mm³</td>
</tr>
<tr>
<td>MCV</td>
<td>55 fl</td>
<td>71 fl</td>
</tr>
<tr>
<td>MCH</td>
<td>18.6 pg</td>
<td>28.5 pg</td>
</tr>
<tr>
<td>MCHC</td>
<td>33.7 g/dl</td>
<td>39.9 g/dl</td>
</tr>
</tbody>
</table>

### DISCUSSION

Ayurveda has a unique understanding of human physiology and pathology that offers a different perspective in diagnosis and treatment of disease. Acharya Charaka described, Mandura and its preparations’ importance to treat the Pandu Roga (Anaemia). Drakshasava is very useful to improve Agni (digestion strength), abnormal function of Agni is the root cause of Pandu Roga. Based on this fact the drug helps in breaking the pathogenesis of Pandu Roga. The drug Dadimadi Ghrita have hepato-protective, appetiser, digestive and carminative properties. Hence it protects the liver and improves digestive power, assimilation of Ahara rasa and Aushadhi.

In the present case by virtue of Rasa and Guna, Mandura Bhasma (metallic/mineral preparation) pacifies aggravated Pitta and maintain the normalcy. As the drug contains Haritaki, Punarnava, Sunthi, Maricha, Pippali, Kutha, Nagarmotha, Chitraka which all are Tikta Duravya and act on liver, the organ for the metabolism of every product and increase the appetite, decrease Daurbalya and drugs like Santhi, Pippali, Chitraka is also used in Shwasa Roga which helps in decreasing problem of breathlessness. The drug Panarpnava Mandura contains Gomutra Bhavita Mandura Bhasma, which increase the iron binding capacity and absorption of iron. Anupan of the drug is Takra which also increase the capacity of digestion. Therefore it is useful in Pandu and act as a good drug for the Pandu.

### CONCLUSION

The patient was evaluated and treated according to Ayurvedic principles. From the study we can conclude that Pandu Roga can be successfully managed by Ayurvedic treatment with lesser chances of recurrence as the disease is treated by its root cause and no side effects are observed during the course of therapy.

### REFERENCES