



Pandu Roga w.s.r. to Iron Deficiency Anaemia-A Conceptual Study.

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ABSTRACT:

In this disease there is predominance of paleness all over the body. Due to its similarity, it can be co-related with modern disease anaemia. In Ayurveda, *Pandu Roga* is a pallor on the skin produced by a quantitative and qualitative *Rakta dhatu* deficit manifested as a lack of haemoglobin and/or red blood cells. *Rasavaha* and *Raktavahasrotas* are the most important in the pathophysiology of *Pandu Roga*. The changing lifestyle of humans via *Ahara and Vihar* has a significant impact in the emergence of many ailments. *Pandu Roga* is one among them as well. Ama is formed as a result of our poor food choices and lifestyle, which then leads to *Agnimandya* and, finally, *Amayukta Ahararasa*. *Rasa Dhatu Utpatti* is hampered, and *Pandu Roga* manifests. Aggravated Pitta is responsible for the creation of *Posaka* (nutrient component) from the *Rasadhatu*, which causes *Rakta* depletion. Inadequate dietary intake, quick development, low birth weight, and gastrointestinal losses caused by increased cow's milk consumption are the most prevalent causes of iron insufficiency in children. According to WHO, anaemia affects one-quarter of the world's population and is most prevalent in pre-school-aged children and women. In children, anaemia varies from 45 to 65%. Pallor, weariness, lack of appetite, palpitations, irritability, weakness, dyspnoea, brittle nails, pica, headache are all clinical manifestations of the condition. According to Ayurveda, the main goal of therapy is to rectify and balance Agni, which allows metabolism to be controlled.

Key words-*Pandu Roga*, Iron deficiency anaemia, *Ahara – Vihar*, *Chikitsa*

INTRODUCTION

The pallor on the skin is a key diagnostic characteristic of *Pandu Roga* and is caused by a quantitative and qualitative shortage of *Rakta Dhatu*, which might manifest as a lack of haemoglobin less red blood cells (RBCs).¹ Considering *Panduta* as the predominant sign, the disease is termed as *Pandu roga*. The nearest correlation of iron deficiency anaemia can be made with *Pandu roga*, because of the predominance of *Panduta* or pallor in the whole body. Iron deficiency

is a very common nutritional disorder worldwide and is known to affect approximately one third of the global population. While its incidence in affluent countries is low, the incidence of IDA in India is very high. According to National Family Health Survey (NFHS) III data, the incidence of anaemia in urban children is 71%, rural is 84%, and overall is 79%. Nutritional iron deficiency is the most common cause of anaemia in India.² Iron Deficiency Anaemia, Thalassemia,



Megaloblastic Anaemia, Haemolytic Anaemia, and other kinds of Anaemia are described in modern medicine. Iron deficiency is one of them. Anaemia is the most frequent nutritional deficiency ailment worldwide, although its incidence is higher in developing nations such as India, where ladies and children are disproportionately afflicted. Iron deficiency anaemia is caused by inadequate iron intake and poor iron absorption.³ Iron deficiency is a relatively common problem in society, and the negative effects of oral allopathic iron preparations are extremely common. With the hope that herbal medication may be beneficial in treating iron deficient anaemia without causing any negative effects.⁴ This conceptual study will highlight, evaluate, elaborate and discuss about *Pandu Roga* with special reference to Iron Deficiency Anaemia.

MATERIAL & METHODS

Material related to *Pandu Roga* & Iron Deficiency Anaemia collected from text book of Ayurveda, commentaries and modern medicine respectively. The index, non-index medical journals has also referred to collect information of relevant topic.

Conceptual Study

Nidan of *Pandu Roga*⁵⁻⁷

Aaharaj hetu of *Pandu Roga*- Table no 1

Viharaj Hetu of *Pandu Roga*- Table no 2

Types of *Pandu Roga*

- *Vataj Pandu*
- *Pittaj Pandu*
- *Kaphaj Pandu*
- *Sannipataj Pandu*
- *Mridbhakshanjanya Pandu*

Poorvaroop of *Pandu Roga*

Premonitory symptoms are warning signs of an upcoming illness. They warn us that a series of unfortunate occurrences will occur in the near future, culminating in full-fledged sickness. *Poorvaroop* is the first sign of sickness.(Table 3)

Samanya Lakshana of *Pandu*

Karnakshweda, Hatanala, Daurbalya, Sadana, Annadwasha, Shrama, Bhrama, Gatrashool, Jwara, Swasha, Gaurava, Aruchi, Gatramarda, Shunakshikutashotha, Harita, Shirnalomata, Hatprabhatva, Kopana Shishiradweda, Nidralu, Shthivana, Alpawaka, Pindikodweshtanam, Katiurupadaruka.

Roopa of *Pandu Roga*⁸⁻¹¹

Table no 4. *Roopa* of *Vataja Pandu*

Table no 5. *Roopa* of *Pittaja Pandu*

Table no 6. *Roopa* of *Kaphaja Pandu*

Table no 7. *Roopa* of *Mridbhakshanjanya Pandu*

Samprapati of *Pandu Roga*¹²

Due to *Nidana*, *Pitta dosha* gets vitiated and expelled by *Vayu*. It then reaches the *Hridaya* and from there it mobilizes into entire body via *Dashadhamani* and get localized between *Twaka* and *Mamsa* causing *Dhatu shaitayata* and *Guruta*. Vitiated *kapha*, *Vata*, *Asruk*, *Twaka* and *Mamsa* cause *Twakavaivarnata* such as *Pandu*, *Haridra*, *Harita*, etc. There are systemic symptoms like Exertion dyspnoea, tiredness, breathlessness, leg cramps, etc. In ayurvedic classics, this diseased condition is known as *Pandu Roga*.

Samprapti Ghatak¹³

- *Dosa -Pitta pradhana Tridosaja*
- *Dusya-Rasa, Rakta, Mamsa*
- *Agni-Jatharagni, Dhatvagni*
- *Agnidusti- Mandagni*
- *Srotas-Rasavaha, Raktavaha*
- *Srotodusti- Sanga*
- *Udbhavasthana- Amasayottha*
- *Adhistan- Twak mamsantar*
- *Svabhava- Cirakari*

Sadhya Asadhyata¹⁴

The signs and symptoms and other conditions indicating incurability of *Pandu Roga* are as follows – -

- When the disease becomes chronic (*Chirotpanna*)
- When excessive dryness has appeared in the patient (*Kharibhuta*)
- When the patient is afflicted with oedema owing to Chronicness of this disease. (*Kalaprakarshat Shuno*)
- When the patient gets yellow vision (*Pitani Pashyati*)
- When the patient is fully or partially constipated (*Baddha Alpa Vitaka*)
- When the Patient passes loose stool which is green in colour and which mixed with mucus (*Sakapha Harita Atisara*)
- When the patient feels exceedingly prostrated (*Deena*)
- When the body is exceedingly white as if besmeared (with whiteness) (*Shwetatidigdhangam*)
- When the patient is exceedingly afflicted with vomiting, fainting and morbid thirst. (*Chhardi - Murchha Trushardita*)
- When the body of the patient becomes pale on account of loss of blood (*Asrika Kshayad shwetatvam*)

Management Through Ayurveda

General treatment methods given in Ayurveda are as follows

1. *Nidana Parivarjana* (Avoid aetiological factors)
2. *Shodhana* (Eliminating the factors responsible for generating the disease).
3. *Shamana* (Palliative treatment)
All accessible Ayurvedic texts address the treatment of Pandu Roga, which may be divided into two categories.
 - *Samanya Chikitsa*. They are *Snehan*, *Shodhana*, *Aaushadhisevan*.
 - *Vishishtha Chikitsa*

*Samanya Chikitsa*¹⁵

- Patients suffering with Pandu Roga should initially get Snehan Therapy, followed by Emetic and Purgation Therapies using unctuous and sharp medications to eliminate Dosas.
- Following bodily cleaning, patients should be provided Wholesome meal made from ancient Sali, barley, and wheat combined with Yusa of Mudga, Adhaki, and Masura, the rasa of dry zone animals.

*Vishishtha Chikitsa*¹⁶

- For *Vatika* Type of *Pandu*, the therapy should be dominated by *Sneha Dravya*.
- For *Paittika Pandu*, it should be dominated by *Tikta* and *Shita* drugs.
- For *Kaphaja* type of *Pandu*, therapy should be dominated by *Katu*, *Tikta* and *Ushna* drugs.
- For *Sannipatika* type of *Pandu*, all the above-mentioned ingredients should be combined.

Some *Aaushad yoga of Pandu Roga*

- *Navayasa Churna*,
- *Manduravataka*,
- *Yogaraja*,
- *Punarnavamandura*,
- *Bijakarista*,
- *Gaudarista*,
- *Dhatryavaleha*.

Modern Aspect of Anaemia

Human blood includes haemoglobin, a crimson pigment that is high in iron. It transports oxygen to many regions of the body. Iron deficiency in the diet reduces the quantity of haemoglobin in the blood, making it thinner and less red in colour, resulting in a lower delivery of oxygen to different regions of the body; this is known as anaemia.¹⁷

Classification

On the basis of cause

- Blood loss

- Inadequate Production of Normal blood cells
- Excessive destruction of blood cells

On the basis of morphology

- Normocytic
- Microcytic
- Macrocytic

Symptoms & Signs¹⁸

- Fatigue, body ache, decreased exercise tolerance, palpitations
- Pallor
- Koilonychia
- Cheilosis
- Inadequate growth in children

Iron Deficiency Anaemia

Iron deficiency is the most frequent nutritional deficiency condition worldwide; however, its incidence is higher in underdeveloped nations. Iron is required for several actions in the human body, including hemoglobin formation. Iron deficiency anaemia occurs when the body lacks insufficient iron in the circulation. This kind of anaemia is more prevalent in teens and women before to menopause. This condition can be caused by blood loss from heavy periods, internal bleeding from the gastrointestinal tract, or giving too much blood.¹⁹

Cause

Pregnancy or periods of growth in childhood, Heavy menstrual cycles, Iron absorption is poor. gastrointestinal bleeding (intestines), dietary variables (low iron or limited diet), medicine (aspirin, ibuprofen, naproxen, and diclofenac), a deficiency in particular vitamins (folic acid and vitamin B12), Kidney-related bleeding Hookworm infection, red blood cell issues, and bone marrow disorders are all possibilities.

Symptoms

Tiredness, lethargy, feeling faint and becoming breathless easily, headaches, irregular heartbeats (palpitations), altered taste, sore mouth and ringing in the ears (tinnitus).

Management:

- Treatment of the cause
- Diet: Green leafy vegetables, nuts, dates, custardapple, meat, liver
- Blood transfusion
- Iron therapy: - a) Oral b) Parenteral

DISCUSSION

Anaemia is described as the destruction of RBCs owing to a lack of oxygen, resulting in tissue hypoxia and a haemoglobin concentration below the normal range.[20] Iron deficiency is the most prevalent cause of anaemia

among all nutritional diseases. Iron deficiency anaemia occurs when the reduction in total iron body content is significant enough to impair erythropoiesis and result in anaemia. Iron deficiency can lead to slowed growth and learning. Children are more vulnerable than adults because to their increasing age and adaptability to new environments, a lack of awareness about diet and hygiene practises, and an initial poorer immune response to fresh diseases and infestations.²⁰ *Pandu Roga*, in which the patient's skin colour changes from normal to *pandu varna*, or a mixture of white and yellow colour that mimics pollen grains of *ketaki* flowers, is more comparable to anaemia w.s.r. to iron deficiency anaemia in which pallor predominates in the body. *Pandu Roga* In Ayurveda and Iron deficiency anaemia in modern medicine are similar on the basis of etiological factors & clinical correlation. Ayurveda treatment of *Kaphaja Pandu* is very useful to treat Iron Deficiency Anaemia.

CONCLUSION

Many people nowadays do not have time to follow a good diet in order to preserve their nutrition. Even women are less concerned about their health. All of the causes that have contributed to the growth of *Pandu Roga* have already been highlighted. *Pandu Roga* is one of the most common and widespread diseases. In *Pandu Roga Tikshna Samshodhana* (purificatory therapies) is the first line of Treatment described by Acharya Charaka. *Samshamana Chikitsa* can thereafter be performed. *Pandu Roga* can be well managed using Ayurvedic medicine and *Samshodhana* treatment rather than allopathic drugs, which have several negative effects. As a result, Ayurveda can offer better management in this area.

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Table no 1. Aaharaj hetu of Pandu Roga

AAHARAJ NIDANA	CH.S.	SU.S.	A.H.
<i>Amla, Lavana Rasa</i>	+	+	+
<i>Ati Ushana</i>	+	-	-
<i>Virudhasana</i>	+	-	-
<i>Atitikshana</i>	+	+	+
<i>Asatmaya Bhojana</i>	+	-	-
<i>Nishpav, Mash, Pinyaak Sevana</i>	+	-	-
<i>Vidagdha Anna Sevana</i>	+	-	-

Table no 2. Viharaj Hetu of Pandu Roga

VIHARAJA NIDANA	CH.S.	SU.S.	A.H.
<i>Divaswapna</i>	+	+	+
<i>Ativyayama</i>	+	+	+
<i>Vegdharana</i>	+	-	+
<i>Pratikarma</i>	+	-	-
<i>Ritu Veshymata</i>	+	-	-
<i>Mansika Nidana- Chinta, Bheya, Krodha</i>	+	-	-

Table 3 Pooravroopa

Poorvarooopa	Cha.	Su.	A.H	Ha.	B.P.
<i>Avipaka</i>	-	+	-	-	+
<i>Akshikutashotha</i>	-	+	-	-	-
<i>Aruchi</i>	-	-	+	-	-
<i>Alpavahnita</i>	-	-	+	-	-
<i>Angasada</i>	-	-	+	-	-
<i>Gatrasada</i>	-	+	+	-	+
<i>Hridspandanam</i>	+	-	+	-	-
<i>Mutrapitrala</i>	-	+	-	-	-
<i>Mridbhakshanaeccha</i>	-	+	-	-	-
<i>Panduta</i>	-	-	-	+	-
<i>Rukshta</i>	+	-	+	-	-
<i>Swedabhava</i>	+	-	+	-	-
<i>Shrama</i>	+	-	+	-	-
<i>Sthivanadhikya</i>	-	+	-	-	+
<i>Twakasputana</i>	-	+	-	+	+

Table no 4. Roopa of Vataja Pandu

LAKSHANA	CH.S.	SU.S.	A.H.	MA.N.
<i>Krishna Pandu twaka</i>	+	+	+	+
<i>Shiroruka</i>	+	-	+	-
<i>Angamarda</i>	+	-	-	-
<i>Kampa</i>	+	-	+	+
<i>Aasyaverasya</i>	+	-	+	-
<i>Balakshaya</i>	+	-	+	-
<i>Bhrama</i>	+	-	+	+

Table no 5. Roopa of Pittaja Pandu

LAKSHANA	CH.S.	SU.S	A.H	MA.N.
<i>Peeta Gatra</i>	+	+	+	+
<i>Jwara, Daha, Trushna</i>	+	+	+	+
<i>Sweda</i>	+	-	+	-
<i>Amloudgara</i>	+	-	+	-
<i>Bhinna Varcha</i>	+	-	+	-
<i>Murchha</i>	+	-	+	-
<i>Katuvakrata</i>	+	+	-	-

Table no 6. Roopa of Kaphaja Pandu

LAKSHANA	CH.S	SU.S	A.H	MA.N.
<i>Shukla Netra</i>	+	+	-	+
<i>Chhardi</i>	+	+	-	-
<i>Romaharsha</i>	+	-	+	-
<i>Aalasya</i>	+	-	+	+
<i>Gaurava</i>	+	-	-	+
<i>Praseka</i>	+	-	-	+
<i>Saada</i>	+	-	-	-

Table no 7. Roopa of Mridbhakshanjanya Pandu

LAKSHANA	CHARAK	VAGBHATA	MADHAV
<i>Akshikoota shotha</i>	+	-	-
<i>Asya shotha</i>	+	+	+
<i>Arsha</i>	-	-	+
<i>Atisara</i>	-	-	+
<i>Bala kshaya</i>	+	-	-
<i>Krimi koshtha</i>	+	-	-
<i>Nabhi shotha</i>	+	-	-
<i>Purisha skapha</i>	+	+	+
<i>Purisha skrimi</i>	-	+	-
<i>Pada shotha</i>	+	+	+