

**PANDUROGA IN CHILDREN**

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**ABSTRACT**

Anemia is common micronutrients disease affects health status of very large population of whole world. Iron deficiency is the most common causes of anemia. Ayurveda described Pandu Roga which correlated with anemia. Ayurveda mentioned causes, symptoms and treatments of Pandu. The Pandu Roga involves lack of haemoglobin due to poor intake of iron through dietary sources, poor absorption and digestive problems may also leads Anemia. The characteristic features of diseases involve discoloration of skin, pita and presence of Ketaki dhuli nibha chaya. Ayurveda described it as “Varnopalakshita roga” which indicates change in the color. The clinical symptoms involve loss of appetite, palpitations, Pandutwa and fatigue.) Ayurveda is the most ancient system of medicine among the different system of medicine existing in the world. In the classification the disease Pandu felt in the group of Varna in which there are significant change in the normal colour of the body. The detail description of Pandu Roga and its classification starts form Ayurvedic Samhitas only .Pandu roga is one of the diseases mentioned in Ayurveda characterized by the whitish discoloration of the skin due to the loss of blood. The disease is comparable with Anemia in the modern medical literature. The incidence of the problem is high in school going children, adolescents and pregnant women.

**INTRODUCTION**

Pandu roga is one of the diseases mentioned in Ayurveda characterized by the changes in the skin colour to white (sweta), yellowish (pita), greenish (harita)etc and is typically characterized by the presence of Ketaki dhuli nibha chaya(discoloration resembling the colour of the Pandanus flowers). The discoloration can also be seen in the sclera. It is one of the “Varnopalakshita roga” i.e., disease characterized by the change in the colour. The disease is referred with various names like Vilohita, Harima and Halima in Vedas and Panaki, Laghavaka and Kumbhahwa by Sushruta.<sup>[1]</sup> According to Charaka samhita the prodromal symptoms in the disease include palpitations, dryness of the skin and mucosal surfaces and malaise. The clinical features mentioned for the disease include pale of the eyes (pandutwa), loss of appetite, periorbital oedema tinnitus and malaise etc.<sup>[2]</sup> The clinical features of the Pandu roga can be compared with the disease Anemia. The term Anemia in Greek language means lack of blood or haemoglobin. It is one of the most common disorders in the developing countries because of the poor nutritional status. It occurs because of the poor intake of the iron and folic acid rich foods. The disease is most commonly seen in children, adolescent girls, pregnant women and lactating mothers.<sup>[3]</sup> In developing countries like India there is burden of population explosion, poverty, overcrowding, poor sanitation, and malnutrition. Indian children are

more prone to develop nutritional deficiency disorders like iron deficiency and ultimately suffer from the disease like Iron deficiency. Anemia resulting from lack of sufficient iron for synthesis of haemoglobin is the most common hematologic disease of infancy and childhood. The frequency of iron deficiency anemia is related to certain basic aspects of iron metabolism and nutrition.<sup>[4]</sup> The Pandu disease affects children, pregnant and lactating women. Ayurveda described Pandu as Pitta Pradana Vyadhi associated with Rasa and Rakta Dhatu. Dhatus nourishment mainly affects in disease due to Pitta Prakopaka Ahara. Twak and Mamsa occur due to Doshas vitiation which resulting Pandu and Haridra Varna.<sup>[5-6]</sup> The pathologically disease involve Agnimandya due to decrease in Abhyavaharana Sakthi Jaranasakthi and Kayagni, responsible for the Dhatwagni and Bhootagni, these all consequences results formation of immature Dhatu and malnutrition occurs due to the impaired Kayagni. Agnivyakriti along with Varnahani, Prabhahani, Utsahahani and Krishata observe.<sup>[6-8]</sup>

**Common Causes of Pandu Roga**

- Ritu vaishamya
- Mandhyagni
- Asaatmya aahara
- Vidagdha anna
- Viruddha ahara
- Lack of iron supply

- Poor socio-economic status
- Presence of other disease (gastric problem)

### Types of Pandu Roga

- Vataj pandu
- Pittaj pandu
- Kaphaj pandu
- Sanipataj pandu
- Mridikabhakshanjaya pandu

### Poorvarooopa of panda roga<sup>[9]</sup>

1. Hridaya spandanam or palpitation, tachycardiya
2. Breathlessness
3. Skinny become rooksha with loss and loss of sweating
4. Eyed nails and face become pale
5. Loss of appetite

### Roop of panda roga<sup>[10]</sup>

1. Karna kshedana (tinnitus). Vertigo and breathlessness.
2. Low grade fever with breathlessness
3. Skin become greenish yellow with loss of hair.
4. Swelling around eye lids
5. Pain in calves

### Samprapti of pandu roga<sup>[11]</sup>

Due to Nidana, pitta dosha gets vitiated and expelled by vayu and it reaches the hridaya and from there it spreads through the dasadhmani and mobilizes entire body and gets localized between tvaka and mamsa. Vitiatedkapha, Vata, Asruk, Tvaka and Mamsa cause tvakavaivarnata such as Pandu, Haridra, Harita etc. Along with skin discoloration there is systemic symptoms like exertion dysopnea, tiredness, breathlessness, leg cramps etc. Such a diseased condition is named as Pandu Roga in Ayurveda classics. These all symptoms of Pandu Roga in hand with that of Anemia explained in modern system of medicine.

### Treatment of pandu roga

#### Thathra Panduvamayi Snigdhashtikshna Urdhva Anulomikahi<sup>[12]</sup>

1. Sodhana
2. Samana

### Sodhana chikitsa

Vamanam & Virechanam is done by snigdha & tikshna dravyas. Every Sodhana karma should be given after snehanam only. Madanaphalam is the most suitable drug for vamana in children. Generally sodhana therapy should be followed with proper care in children. Samana chikitsa.

1. Treatment according to predominant dosha
2. Specific Treatment
3. Symptomatic Treatment
4. Pathya Apathya

### Ayurveda drugs & their properties used in anemia

Most of the drugs possess Katu and Tikta Rasa increases Rakta and absorption of iron. Shunthi, Marica, Pippali and Haridra are Katu rasa pradhana dravyas which promote Agni due to their Deepana and Pachana properties, manage Aruchi and improve iron bioavailability. Laghu, Ruksha, Snigdha gunas of drugs improves Dhatu, Shaithilya and Gourava. Ushna Virya properties of drug help to improve Agni. Trikatu and Triphala also used in disease acts as a Deeana while Pramathya properties of Marica help in clearing the Srothoavarodha. Other drugs such as Vidanga, Haridra, Patha and Mustha also possess relief in Panduroga. Loha bhasma directly increase the Rakta dhatu and thus offer Hematinic effect. Rasayana such as Amalaki prevent Ojokshaya. These all drugs also possess Tridosahara and Kapha Vatashamaka properties.<sup>[13,14,15,16]</sup>

### DISCUSSION

Anemia is defined as destruction of RBC's due to lack of oxygen occur tissue hypoxia resulting into haemoglobin concentration below the range of normal values.<sup>[17]</sup> In developing countries like India, with increased burden of population and low per capita income, overcrowding, poor sanitation etc. which lead to nutritional deficiency in children.<sup>[18]</sup> Among all nutritional disorders, iron deficiency is common cause for Anaemia. IDA is defined as the depletion of iron storage in the body (normally 1 mg of iron should be absorbed each day), where loss of iron exceeds the iron intake and resulting in insufficient iron for haemoglobin production (normally new born has about 0.5g of iron and adults as about 5g-average of 0.8mg iron absorption per day) The reduction in RBC volume leads to less oxygen carrying capacity of blood and leading to various clinical symptoms. The most common causes of Anemia are poor diet, milk intolerance, and chronic blood loss etc.<sup>[19]</sup>

### CONCLUSION

Pandu roga, where the colour of the patient is like the flower "Ketaki raj" which is similar to the combination colour of white and yellow in a particular proportion, is more similar to the anemia with special reference to Iron Deficiency Anemia (IDA) of modern medicine on the basis of etiological factors & clinical correlation iron deficiency Anemia is one of the leading nutritional deficiency diseases prevailing in Indian children Pandu explained in Ayurveda can be correlated with the Iron deficiency Anemia. Ayurveda treatment of Kaphaja Pandu is very useful to treat the Iron deficiency Anemia of children.

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