

## UNRAVELLING THE MIND-BODY CONNECTION: EXPLORING THE ROLE OF PSYCHOLOGICAL FACTORS IN THE DEVELOPMENT OF PANDU ROGA (IRON DEFICIENCY ANAEMIA)

Dr. Bhagyashri Purushottam Kamdi<sup>1\*</sup>, Prof. Dr. Jayashri Katole<sup>2</sup> and  
Dr. Ashish G. Keche<sup>3</sup>

<sup>1</sup>PG Scholar Department of Kayachikista, Dr. V. J. D Gramin Ayurved College Patur Dist.  
Akola, Maharashtra.

<sup>2</sup>H.O.D. of Kayachikitsa, Dr. V. J. D Gramin Ayurved College Patur Dist. Akola,  
Maharashtra.

<sup>3</sup>Asso. Professor of Department of Kayachikitsa, Dr. V. J. D Gramin Ayurved College Patur  
Dist. Akola, Maharashtra.

Article Received on  
25 September 2023,

Revised on 15 Oct. 2023,  
Accepted on 05 Nov. 2023

DOI: 10.20959/wjpr202320-30200

### \*Corresponding Author

Dr. Bhagyashri

Purushottam Kamdi

PG Scholar Department of  
Kayachikista, Dr. V. J. D  
Gramin Ayurved College  
Patur Dist. Akola,  
Maharashtra.

### ABSTRACT

A pale yellow discolouration on the skin is one of the clinical symptoms of Pandu "Roga, a disease entity mentioned in Ayurveda that is related to many types of anaemia. *Pandu Roga*, now recognized as Iron Deficiency Anaemia, has traditionally been associated with dietary factors and iron absorption. Along with the several etiological elements, Acharya Charaka has specifically highlighted a few psychological causative factors. Three of these characteristics — Chinta, or excessive concern; Bhaya, or fear; and Shoka, or grief—are major contributors to the pathophysiology of Pandu Roga. However, emerging research indicates that psychological factors play a substantial role in its etiopathogenesis. This article investigates the intricate relationship between the mind and the body in the context of *Pandu Roga*, shedding light on the influence of psychological stress,

psychosomatic aspects, and behavioural patterns. It reveals that these variables interfere with the body's normal iron distribution process and have an impact on erythropoiesis, which results in iron deficiency anaemia. Understanding these connections is vital for a holistic approach to the prevention and treatment of anaemia, emphasizing the importance of addressing both physical and psychological factors in patient care.

**KEYWORDS:** Anaemia, Stress, Pandu, Anxiety etc.

## INTRODUCTION

Pandu Roga, a condition characterized by low haemoglobin levels and iron deficiency, has been a subject of interest for centuries. Historically, it was primarily associated with dietary insufficiencies and inadequate iron intake. While these factors undoubtedly contribute to the condition, there is a growing awareness that psychological factors can influence the development and progression of Pandu Roga. Etiological factors, also known as nidanas, are the agents that cause any disease, whether directly or indirectly. According to Ayurveda, these etiological variables are important for both the disease's cause and its treatment in order to prevent Nidanas. The literature provides a list of different Nidanas for each disease and for each stage of the pathophysiology. Acharya Charaka lists several psychological etiological variables in the chapter of Pandu Roga, including Kama (over thinking about sex), Krodha (rage), Chinta (excessive worrying), Bhaya (fear), and Shoka (grief).<sup>[1]</sup> However, there hasn't been a published scientific study up to this point that explains how these factors contribute to the development of anemia. Therefore, it was determined to investigate the three elements known as the primary causes of psychological stress (PS), which in turn plays a significant part in the pathogenesis of different types of anaemia. While analysing the data, it is found that overall prevalence of Anaemia has increased from 74.2% to 79.2%.<sup>[2]</sup> Acharya Charak has included Pandu Roga in *Rasa pradoshaja vikara*<sup>[3]</sup> and in *Santarpana janya vyadhi*.<sup>[4]</sup> Vachaspatya refers Pandu as the colour of patient resembles colour of pollen grains of ketki flower (*Pandanus fortissimos*) which is whitish yellow (pale) in appearance.<sup>[5]</sup> Due to symptoms like pale skin, palpitation, tiredness, deficiency of blood etc., the nearest correlation of *Pandu Roga* can be made with "Anaemia" in modern science. However, it is well acknowledged that a number of steps or processes must undoubtedly exist between these two extremes of causation and effect. Agni vitiation is the manifestation of these missing linkages.<sup>[6]</sup> There are references in the texts that say that even when a person eats wholesome food in the right amounts, their digestion may be hindered if they experience grief, fear, anger, sorrow, or an uncomfortable sleeping position. This suggests that these conditions vitiate Agni, which in turn affects the digestion process.

## MATERIAL AND METHOD

Material has been collected from ancient Ayurvedic texts, Research Journals, and electronic databases. A comprehensive search was conducted using the terms "role of PS in the

causation of any anemia and its mechanisms" on the search engines Google, Bing, and PubMed.

## AIM AND OBJECTIVE

To study the Role of Psychological Factors in the Development of Pandu Roga (Iron Deficiency Anaemia) and Nidanapanchaka of Pandu Roga with Ayurvedic aspect along with Ayurvedic principles of management of the disease.

## ETIOPATHOGENESIS OF PANDU ROGA

1. **NIDANA (Etiological factors):** Nidana of Pandu Roga according to Acharya Charaka are classified as Aharaj, Viharaj and Manasika nidana.<sup>[7]</sup>

### • Aharaja Nidana

Diet plays an important role in the normal development and maintenance of different Dhatus as well as in the vitiation of Dosha.

Acharya Charaka has described following etiological factors regarding Ahara. → Excess intake of kshara (alkaline), amla (sour), lavana (salt), ushna (hot) and teekshna (penetrating) Ahara.

- Virudhha (incompatibles) and asatmya (unwholesome) Ahara.
- Excessive intake of Nishpava, Masha, Pinyaka and Til Taila.
- Excessive consumption of Madya (wine).
- Mridabhakshana.
- Excessive intake of Kashaya, katu rasa.

### • Viharaja Nidana

According to Acharya Charaka.

- Vidagdhe anne diwaswapna vyayama vyavaya which means sleeping at day time, exercise and sexual intercourse even before the food is not properly digested.
- Pratikarma Vaishmaya means improper administration of panchakarma.
- Ritu Vaishamay (improper management of seasonal regimen).
- Vega Vidharana means suppression of natural urge → Affliction of mind with Kama, Bhaya, Chinta, Krodha, Shoka.

Acharya Harita has mentioned some new Viharaja Nidana and modified some of the nidana from ancient texts which are.

- Nidranasha (Loss of Sleep)
- Atinidra (Excessive sleep)
- Avyayama (No any exercise)
- Atishrama (Excessive exercise)
- Snehavibhram, Snehatiyoga, Amatisara have been also taken into consideration as the cause of the disease.

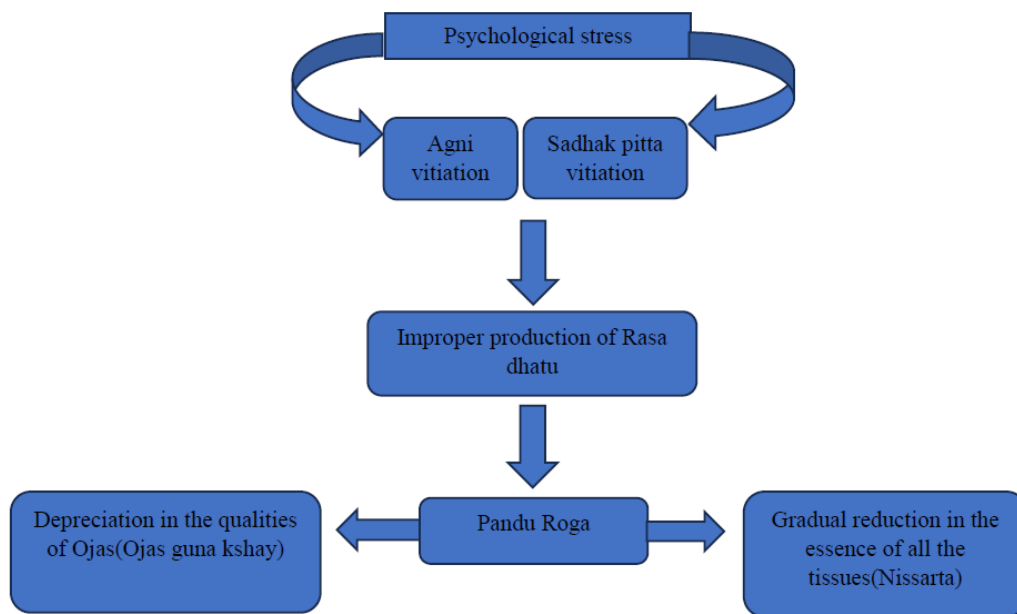
• **Manasika Nidana**

- Kaama
- Chinta
- Bhaya
- Shoka
- Krodha

Other than above Nidana, Acharya Sushruta has also mentioned Madya Sevana, Mruda Sevana as Nidana of Pandu Roga.<sup>[8]</sup>

**Nidanarthakara roga**

Pandu roga is mentioned as an updrava Swaroopa or as a symptom of several different ailments in a variety of Ayurvedic publications. Therefore, all of these different illnesses, such as Raktaarsha, Raktarbuda, Raktapradara, Rajyakshama, Punaravartaka Jwara, etc., which either directly or indirectly vitiate Doshas in our bodies and appear as Pandu Roga, can be thought of as the cause of Pandu, that is Nidanarthaka Roga of Pandu.

**Samprapti (Pathogenesis)**

**Figure 1: The pathogenesis of psychological stress in causing *Pandu Roga* and its effects in the body.**

The term "digestion" in Ayurveda, "Pachana," refers to the entire process of the body's metabolism, absorption, and assimilation and is dependent on the Agni operating properly.<sup>[9]</sup> In The food substrate is only changed into a form that is appropriate for usage by our body tissues after it has been digested by Jatharagni and Bhutagni. Then, by the activity of the corresponding Dhatvagnis, it is transformed into the appropriate tissue.<sup>[10]</sup> For sustenance and power, all of these Bhutagnis and Dhatvagnis rely on the primary Agni, or Jatharagni. When Jatharagni vitiates, the other Agnis will eventually follow suit and the body's tissue condition would be impacted. Therefore, any of the aforementioned factors could be connected to this improper digestion, which would lead to a deficiency in either quantity or quality of Rasa Dhatu from Adya Rasa Dhatu (the body's fluid tissue that contains the waste products of digestion and metabolism and circulates them throughout the body to nourish other body tissues) (deficiency in the amount of nutrients present in it as result of digestion and absorption). The generation of Rakta Dhatu, which is created when Raktagni acts on Rasa Dhatu, is further impacted by this incorrect Rasa Dhatu.<sup>[11]</sup> This could be the cause of the Acharyas' inclusion of Pandu in Rasa Pradoshaja Vikaras' description of Alpa Rakto, or diminished blood, as one of the disease's primary symptoms in addition to Panduta.<sup>[12]</sup>

PS, in addition to the processes mentioned above, has some other effects on the body, as it is one of the elements accountable as an etiological agent for generalized debilitation of the body (Samanya Kshaya Hetu) as well as diminished strength and immunity status of the body (Oja Kshaya).<sup>[13]</sup> It is worth noting that in the sickness Pandu Roga, there is also a description of a decline in the qualities of the Ojas (Ojo Guna Kshaya) and an absence of pure essence in all body tissues (Nihsaarata).<sup>[14]</sup> Ayurveda says that Sadhaka Pitta, which is found in the Hridaya, is the entity in charge of an individual's mental faculties, excitement, pride, and accomplishment of set goals.<sup>[15]</sup> Hridyastha Pitta's role in the etiology of the disease is also discussed in the pathogenesis of Pandu Roga. As a result, it is unquestionably true that Sadhaka Pitta is involved due to PS. It's also crucial to keep in mind that Pitta Dosha has its seat in Rasa Dhatu.<sup>[16]</sup> Therefore, the pathophysiology that follows is suggested, taking into account all of the previously mentioned features of PS's influence.

## DISCUSSION

In Ayurveda, Chinta, Bhaya, and Shoka (PS) are listed as etiological elements in the causation of Pandu Roga<sup>[17]</sup>, but no specific information regarding the disease process or the method of action is provided. But in some spots, special cues are found that elucidate and expand on the overall comprehension of the subject. The fact that there is a clear cause and effect relationship between these psychological factors and Pandu Roga is significant because Pandu Roga is a Rasa Pradoshaja Vikara and excessive worry or stress (Chintyaanam cha Atichintanaat) has been identified as the specific etiological factor for the vitiation of Rasa Vaha Srotas,<sup>[18]</sup> which are channels that carry the body's first tissue element formed from digested nutrients.<sup>[19]</sup> Pandu Roga is Pitta Pradhana Vyadhi, Pitta is responsible for the normal colour of the body but when it gets vitiated, Panduta (Pallor) occurs. Though Pitta is Pradhana Dosha in Pandu Roga, Vata Dosha also plays a crucial role in the manifestation of Pandu Roga, mainly Vyana Vayu has a relation with Samprapti of Pandu Roga. Pandu is a Rasavaha Srotas Vyadhi from which a lot of people suffer. In Samhitas most of the Acharyas have described five types of Pandu Roga i.e. Vatika, Paittika, Kaphaja, Tridoshaja and Mridabhakshhanajanya Pandu. The daily faulty routine activity related to mental or physical, faulty dietary habits like Mridikabhakshana, taking food deficient in quality and quantity, Nidanarthaka Roga is some etiological agents of Pandu Roga. Acharya Charaka mentioned three premonitory Symptoms of Pandu Roga i.e. Hridyaspandanam, Rokshyam and Shram which indicate its future presence. Also in Charak Samhita Samanya and Visheshrupa of Pandu Roga is mentioned. Pandu is Sadhya Roga but in later stages due to chronicity, it

develops some complications. Hence, it is necessary to treat it in the early stage. According to Acharya Charak in Sadhya Pandu Roga medicated Teekshna Vaman and Virechan should be done. For the diagnosis and effective treatment, a physician must have complete knowledge of Pandu Roga by different Samhitas. The mind-body connection has been a subject of fascination for centuries. The interplay between psychological factors and physical health is a complex and dynamic field of study. This article delves into the intriguing relationship between psychological factors and the development of Pandu Roga, a condition described in Ayurvedic medicine that shares similarities with anemia. One of the key aspects to consider is how psychological stress can contribute to the development of Pandu Roga. Stress is known to impact the body in profound ways, affecting various physiological systems. Chronic stress can lead to the depletion of vital nutrients, such as iron, which is essential for hemoglobin production. This depletion can result in anemia, a hallmark of Pandu Roga. The mind-body connection is a fascinating and evolving field of study that has significant implications for our understanding of health and disease. Exploring the role of psychological factors in the development of Pandu Roga highlights the need for a comprehensive approach to healthcare that addresses not only the physical symptoms but also the emotional and mental aspects of well-being. By unraveling this intricate relationship, we can pave the way for more effective and holistic treatments for conditions like Pandu Roga.

## CONCLUSION

The aforementioned studies and the ensuing discussion demonstrate that the scientific explanation for the etiopathogenesis of Bhaya, Shoka, and Chinta in the causation of Pandu Roga is that these factors cause iron deficiency anemia by inhibiting the process of erythropoiesis and causing a significant reduction of serum and bone marrow iron. This study also indicates that inflammatory mediators including IL6, hepcidin, and others are involved in the pathophysiology of Pandu Roga, which is caused by the Vata-dominant factors Shoka and Bhaya mentioned above. Previous research has demonstrated a strong resemblance between the inflammatory mediators and the Ayurvedic Pitta Dosh. Pandu Roga, or Iron Deficiency Anemia, is a multifaceted condition with various contributing factors. While dietary deficiencies and iron absorption remain central to its etiology, the influence of psychological factors cannot be ignored. This article highlights the need for a holistic approach to the management of Pandu Roga, addressing not only the physical but also the psychological aspects of the condition. Recognizing the mind-body connection is essential for a more effective and comprehensive approach to the prevention and treatment of anemia.



**REFERENCE**

1. Aacharya YT, editor. Charaka Samhita of Agnivesha, Chikitsa sthana, Ch. 16, Ver. 7-9. Reprint edition. Varanasi: Chaukhambha Surbharati Prakashana, 2005; p. 527.
2. Park's Textbook of Preventive and Social Medicine, Dr. K. Park, M/s Banarasidas Bhanot Publishers, Pune, 25th Edition, 2019; Nutritional Problems in Public Health, Page 593.
3. Agnivesha, Charaka Samhita, Edited with "Charaka Chandrika" Hindi Commentary by Dr. Brahmanand Tripathi, Edition 2013, Chaukhamba Surbharti Prakashan, Varanasi, Sutra sthana Adhyaya 28/9-10, Page 548.
4. Aacharya YT, editor Charaka Samhita(3) Sutra sthana 23/5, Reprint edition. Varanasi: Chaukhambha Surbharati Prakashana, 2005; p. 421.
5. Vachaspathyam by Taranath Tarkavachaspati Bhattacharya, Part 5, Chaukhambha Sanskrit Series Office, Varanasi, 1962.
6. Agnivesha, Charaka Samhita, Ed. P.V.Sharma, Vol. 2, Chaukhamba Orientalia, Varanasi, Seventh Edition, 2005; Chikitsa Sthana Adhyaya 16/7-9: Page 273.
7. Sushruta, Sushruta Samhita, Cheif Ed. G.D.Singhal, Part 3, Chaukhamba Sanskrit Pratishthan, Delhi, Second Edition, 2007; Uttara tantra 44/3, Page 319.
8. Ibidem Charaka Samhita (1), Chikitsa Sthana, Grahani Dosha Chikitsitam Adhyaya, 15/3-17; 512-4.
9. Ibidem Charaka Samhita (1), Chikitsa Sthana, Grahani Dosha Chikitsitam Adhyaya, 15/15; 514.
10. Ibidem Charaka Samhita (1), Chikitsa Sthana, Grahani Dosha Chikitsitam Adhyaya, 15/16; 514.
11. Ibidem Charaka Samhita (1), Chikitsa Sthana, Pandu Roga Chikitsitam Adhyaya, 16/6; 526.
12. Ibidem Charaka Samhita (1), Chikitsa Sthana, Pandu Roga Chikitsitam Adhyaya, 16/5; 526.
13. Babu S. Suresh, editor. Ashtanga Samgraha of Vagbhata, Sutra Sthana. Ch. 20, Ver. 3. First edition. Varanasi: Chaukhambha Orientalia, 2004; p. 198.
14. Ibidem Charaka Samhita (1), Sutra Sthana, Maha Rogaadhyaya, 20/8; 113.
15. Chunlan Wei, Jian Zhou, Xueqiang Huang, Min Li. Effects of psychological stress on serum iron and erythropoiesis. Int J Hematol, 2008; 88(1): 52-6.
16. Ibidem Charaka Samhita (1), Pandu Roga Chikitsitam Adhyaya, 16/9; 527.
17. Ibidem Charaka Samhita (1), Vimana Sthana, Srotasam Vimanam Adhyaya, 5/13; 251.



18. Shastri Ambika Dutta editor. Sushruta Samhita of Dalhana, Sutra Sthana, Ch. 24, Ver. 10.  
13th edition. Varanasi: Chaukhambha Sanskrit Sansthan, 2002; p. 102.