Abstract:
The Prime aim of Ayurveda is to maintain the positive health and to eradicate the illness in a diseased through holistic approach. Many patients are seen suffering from Pandu Roga (Iron deficiency anaemia) due to modern Stressful lifestyle, improper dietary habits and routine. There is loss of prabha (complexion) and kanti (glow) which is due to ras(plasma), rakta (blood) and ojakshaya (depletion of oja). Charakacharya has described some psychological etiological factors among which Chinta (worry), Shoka (grief) and Bhaya (fear) are three main factors, which play an important role in the etiopathogenesis of Pandu Roga (Iron deficiency anaemia). Anaemia is a disorder that develops when our blood lacks enough healthy red blood cells or haemoglobin. Haemoglobin is a main part of red blood cells and binds oxygen which refers to a decreased number of circulating red blood cells. Anaemia is a public health problem, although the primary cause is iron deficiency. More frequently it coexists with a number of other causes, such as nutritional deficiencies, malaria, parasitic infection, and haemoglobinopathies. In today's modernized lifestyle, we see many people in the community are suffering from psychological problems including stress, anxiety, depression etc. All these factors lead to mental illness and then Physical illness. According to the national mental health survey nearly 11% of Indians above 18 years are suffering from such disorders. The present paper aims to explore the scientific explanations for the above mentioned Psychological etiological factors in the causation of Pandu vyadhi (Anaemia).

Keyword: Pandu roga, Anaemia, Bhaya, Chinta, psychological stress, Shoka
INTRODUCTION

_Nidanas_ (etiological factors) are the agents responsible for the causation of any disease – be it directly or indirectly. Ayurveda has laid down the importance of these etiological factors for both the causation of the disease and the treatment for the avoidance of the _Nidanas_. A list of various _Nidanas_ have been given in the texts for every disease as well as for all stages of the pathogenesis.¹ Pandu is a disease which is separately described in ayurvedic treatise by all Acharyas. Acharya Charak as mentioned it under the category of _Rasa Pradoshaja Vyadhi_ as well as _Santarpan Janya Vyadhi_ (i.e., the diseases due to over nutrition and its treatment). Acharya Sushruth as mentioned it under the category of _Rakta Pradoshaja Vyadhi_ (blood disorders) as well as _Apatarpan Janya Vyadhi_ (i.e., the diseases due to under nutrition and its treatment).² In contemporary science, the description regarding anemia is available. The cardinal sign of the anemia is pallor and general weakness. The meaning of _Pandu_ (Iron deficiency anemia) itself is pallor or whitish pale color. Due to this similarity, _Pandu_ (Iron deficiency anemia) can be comprehended as an anemia.

As per the WHO, Anemia is a public health problem that affects population in both rich and poor countries. There are number of conditions such as malaria, parasitic infection, impaired production, blood loss, increased RBC destruction, nutritional deficiency etc. are responsible for manifestation of disease.³ On the basis of causative factors and morphology of red blood cell, anemia is classified into various type. Among the all types, iron deficiency anemia is more common in developing country like India. It is described under the nutrition deficient diseases although it is also found in over nutrient people.

MATERIAL AND METHOD

_Pandu Roga_ (Iron deficiency anaemia) has been described on the basis of the colour of the diseased person, it is like the ‘ketaki raj’ which is Yellow and white in particular proportion. The term ‘Bhekavarna’ is used for pandu _vyadhi_ (Iron deficiency anaemia). The discoloration of skin is known as ‘Panduta’ (Skin Pallor).

_Hetu_ (Etiological Factors)³

Amla(sour), katu(bitter), lavana Rasa (salty) atisevana, kshara (alkaline), ushna (hot), tikshna(sharp),ruksha ahara atisevana (excessive intake of dry food) , Asatmya bhojana (unwholesome food), viruddha bhojana (incompatible food), Veggidharan (Suppression of natural Urges), Divaswapn (Excessive day sleep), Aatimaityun (excessive coitus), Aativayam(excessive exercise) causes mandagni, Vata prakopa and Pitta prakopa. Acccording to Harita samhita, Kashaya rasa (Astringent) is said to be the main etiological factor of _Pandu Roga_ (Iron deficiency
anaemia). According to Charakacharya and Sushrutacharya Lavana Rasa is the cause of Pandu roga.

**Purvarup (Prodromal Symptoms)**

Hrudaya spandana (palpitations), rokshya (dryness), swedabhava (no sweating), shrama (fatigue). Twakasphatana (skin cracking), shitivana (spitting), gatrasada (malaise), Mriddhakshana (dust eating), prekshanakutshoth (orbital swelling), vinmutrapitatwa (yellowish discolouration of urine, faeces), avipaka (indigestion).

**Rupa (Symptoms)**

Karnaksweda (tinnitus), hatanala (weak digestion power), sadana (Weakness), Aanavadvit (intense disgust of food), Shram (fatigue), Bhram (giddiness), Gatrasul (body ache), Jwar (fever), Shwas (dyspnoea), Gaurav (heaviness in body), Aruchi (anorexia). Periorbital oedema, Greenish Complexion, Small hair falls off, irritability, dislikes cold, sleepiness, excessive spitting, speaks less, leg Cramps, feels pain in lumbar, feet and thighs region while climbing.

**Samprapti (Pathogenesis)**

Pittakar Aahar vihar Sevan leads to pitta dosha aggravation, which is located in Hrudaya (heart). This Pitta dosha dominated by Vata dosha circulates in the body through the dash dhamsnis from heart. The Parkopit pitta vitiates kapha, vata, asruka(blood), twacha (skin) and mansa (muscle) and leads to discolouration’s like Pandu(yellow), Harita (green) and Haridra.

**Psychological Aspects**

Ayurveda describes Three qualities of Mind Satva (Purity), Raja (Arrogance) and tama (Darkness). Out of which Raja and Tama are the Manasik Doshas. The Manasik hetus like Chinta, Shoka, Bhaya, Krodha, Dwesh, Matsar etc leads to Manasik (Mental) dosh Dusti and that further aggravate the Sharirik (Physical) doshas like Vata, Pitta and Kapha. According to Vagbhat acharya the Intellectual Properties, Pride etc of an individual depends upon the Sadhak Pitta. The Samprapti (pathogenesis) of Pandu Roga also describes the involvement of Hridyastha Pitta in the disease Progression and pathogenesis. Hence, It can be said that Psychological Factors can Vitiate the Hrudayastha Sadhak Pitta. Thus, The Psychological Stress (Due to Krodha, Shoka, Bhaya etc) leads to Agni and Sadhak Pitta Vitiation that causes the Improper production of Ras Dhatu and Further leads to gradual reduction of essence of all Dhatus (Tissues) and leads to Pandu roga (iron deficiency anemia).

**DISCUSSION**

According to Charak acharya, Chintyaanam cha Atichintnaat (excessive worry or stress) has been described as the specific etiological factor for the vitiation of Rasa Vaha Srotas. Also Pandu Roga (iron deficiency anemia). is a Rasa Pradoshaja Vyadhi. Also the Jatharagnimandya leads to the improper digestion, resulting in the deficient production of Rasa Dhatu from Adya Rasa Dhatu (the fluid tissue of the body). The Rakta Dhatu Production is then affected due to the improper formation of Ras Dhatu (plasma), as the Rakta Dhatu (blood) is produced by the action of Raktagni on Rasa Dhatu (plasma). This may be the reason why the Ancient Acharyas have included Pandu (iron deficiency anemia.) in Rasa Pradoshaja Vikaras and described Alpa Rakta and Panduta as one of the main features of the disease.

**CONCLUSION**

Discussion reveals that the scientific explanation to the etiopathogenesis of Chinta...
(worry), *Shoka* (grief) and *Bhaya* (fear) in the causation of *Pandu Roga*, i.e., to say that these factors cause iron deficiency anemia by causing a significant reduction of serum and bone marrow iron while also inhibiting the process of erythropoiesis. This study also reveals the involvement of inflammatory mediators such as IL6, hepcidin in the pathogenesis of *Pandu Roga* (iron deficiency anemia) caused due to the above-stated factors of *Shoka*(grief) and *Bhaya*(fear), which have been described to be *Vata* dominant. Earlier studies have already proven that the inflammatory mediators are very much similar to the *Pitta Dosha* of Ayurveda. Thus, the above study throws some light on the possible role of *pitta* in the pathogenesis of *Pandu Roga* (iron deficiency anemia) caused due to the above-stated factors of *Shoka* and *Bhaya*, which have been described to be *Vata* dominant. Earlier studies have already proven that the inflammatory mediators are very much similar to the *Pitta Dosha* of Ayurveda. Thus, the above study throws some light on the possible role of *pitta* in the pathogenesis of *Pandu Roga* (iron deficiency anemia) and confirms the Ayurveda *Samprapti* (pathogenesis) also to some extent. However, still more studies are required to throw light on the other attributes of the pathogenesis of *Pandu Roga* (iron deficiency anemia).

Acknowledgement - None
Conflict of interest - None
Financial Support - None

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