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A Critical Interpretation on *Pandu Vyadhi* (Iron deficiency anemia): A Brief Review Dr. Sonal Chandeshwar¹, Dr. S.D. Khichariya², Dr. Pramod Kumar Baghel³

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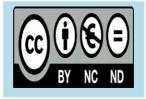
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ABSTRACT

Pandu denotes Paleness in the body is predominant throughout this condition. It may be co-related with current disease anaemia because of its resemblance. Nearly all of our *Acharyas* will clarify *Pandu*. Rasavaha and Raktavaha srotas (channels carrying lymph/plasma and blood) were primarily involved in the pathogenesis of Pandu through Ahara (diet) and Vihar(lifestyle) . The evolving lifestyle of humans plays a major role in the manifestation of various diseases. One of them is *Pandu* as well. *Ama*, which further activates *Agnimandya* (weak digestion) and eventually *Amayukta Ahara Rasa*,(undigested food juice) is formed by our flawed eating habits and lifestyle. It hampers *Rasa Dhatu Utpatti*, and *Pandu*(Anemia) manifests itself. As a result of the *Rakta* depletion,(blood deficiency) Aggravated *Pitta* is responsible for generating *Posaka* (nutrient portion) from the *Rasadhatu*.(Plasma) *Pandu*, (Iron Deficiency Anaemia.)

Keyword: Pandu, Anaemia, Iron Deficiency Anaemia



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INTRODUCTION:

It is seen several times in Pandu Patients that *Rakta(blood)* gets vitiated by *Doshas*, primarily by *Pitta Dosha* as *Pittavargiya* is *Rakta* (blood) and illness like *Pandu* emerges. In the disease condition listed under the *Pandu*, there may be several color modifications such as *Harita, Haridra*(green-yellowish discoloration) . In *Greek*, the term Anaemia indicates a lack of blood. It is essentially a

hemoglobin deficiency, and there are several forms of this deficiency. Iron deficiency anaemia is the most prevalent form of anaemia found, anaemia may result from a wide variety of factors, including dietary malnutrition, immediate or sluggish blood loss due to trauma or diseases, destruction of red blood cells due to various metabolic and immunological disorders or toxins, bone marrow disease, general systemic diseases such as infections

MATERIALS AND METHODS:

Materials related to *Pandu* have been obtained from various journals, *Ayurvedic* and Contemporary Text Books, Authoritative Websites Reputed Newspapers, Authoritative Literatures, Manuscripts, *Sanskrit* Dictionary, etc.

Nidana of Pandu²

Pandu's general etiology, or *Samanya Nidana*,(general etiology) is defined in *Charaka Samhita*. Both of which were specifically linked to *Aharaja*,(diet) *Viharaja* (lifestyle)*and Nidanarthakara Roga*. (unusual association of diseases). *Pandu* is believed to be *Pitta Doshapradhana*. *Pitta's* provocative causes can also be taken as a source of *Pandu*.

Hetu(Causative factor)

Faulty diet:-

Asatmya bhojana, viruddha bhojana(incompatible food), *Amla*(sour),

katu(pungent), lavana Rasa (salty) atisevana (excessive intake), *kshara*(alkali) *ushna*(hot), *tikshna*(sharp), ruksha ahara (dry diet), mandagni, Pitta *prakopa, vata prakopa* are triggered by atisevana(excessive intake), In Harita samhita, the etiological component of Pandu is said to be Kashaya Rasa. Charaka and Sushruta mention Lavana Rasa (salty) as the source of Pandu. According to Sushruta, Kayashaithilya and vaivarnata (dis colouration) are produced by excessive consumption of Amla Rasa (sour) and Lavana Rasa(salt).

Deficient in quantity:

Abhojana (no intake of food) and Pramita bhojana (reduced intake of food) vitiate vatadosha, Pittadosha, and Agni and trigger Pandu to malnourish and aptarpanavat.(debility)

Deficient in quality-

Mandagni and Tridosha prakopa, mostly

Pitta, are caused by *Dravyas* like *Nishpava* (*Lablab purpureus*) *Tila Taila*,(*sesame oil*) *Pinyaka* (foods prepared with paste of sesame), *Masha*(Black gram), *Madya*(wine), *Matsya*(fish), *Mridbhaksana*(pica), thereby causing the disease. Ingested food was translated into *vidagdha*.

(Indigestion)

Poorvarupa (Premonitory signs and symptoms)

Premonitory signs and symptoms of *Pandu* are as follows;

- Hridayaspandana (palpitation of heart)
- Rukshata (Roughness)
- *Swedabhava* (Absence of sweat)
- *Twakasphotana* (Cracking of the skin)
- *GatRasada* (General body malaise)
- Mridabhakshana (liking for mud intake)
- Prekshanakutshotha (swelling over eyelid)
- Vinmutrapita (yellowish discoloration of faecal matter and urine)
- Avipaka (indigestion)

Roopa (Monitory signs and symptoms)

- Durbalata (debility, malaise)
- Annadwesha (aversion towards food)
- Shrama (exhaustion)
- Bhrama (giddiness)
- Hataprabha (loss of lusture)
- Irritability, Shishirdweshi (dislikes cold things)
- *Karnaksweda* (tinnitus)

- *Hatanala* (suppression of digestion power)
- Weakness
- *Sadana*(debility)
- Fatigue
- Fever
- Dyspnea
- Heaviness in body
- Anorexia.

Bheda(types) of Pandu

According to Acharya Charaka Pandu is classified into 5 types.

- 1. Vataja Pandu
- 2. Pittaja Pandu
- 3. Kaphaja Pandu
- 4. Sannipataja Pandu
- 5. Mrittika Bhakshanajanya Pandu

Pandu Upadrava (Complications)

- *Peedana* (exhaustion and discomfort in the region of heart)
- Aruchi (anorexia)
- Pipasa (thirst)
- Chhardi (vomiting)
- Jwara (fever)
- Murdharuja (headache)
- Agnisada (dyspepsia)
- *Kanthashotha* (oedema in throat)
- Abalatva (debility)
- Murchchha (fainting)

Samprapti (Pathogenesis)³

According to Charaka

Lavana Adhik Ahara Vihara Nidana Sevana's (excessive intake of salty diet), excessive intake of Kshara leads to the Dosha Prakopa Pitta Pradhana, which leads to the Rakta Dhatu Pradushana(vitiation of blood). Vitiated Pitta in the *Hrudaya*(heart) is expelled from its Sthana(place) due to Kupitavata and joins the Dashadhamanis(10 arteries) and spreads around the body and settles between the Tvacha (skin)and Mamsantara (flesh) and performs the further vitiation of the Kapha, Vata, Tvacha, Rakta, Mamsa and manifests into the Pandu disease that shows Twacha's Pandu, Harita, Haridradi **Vivarnata** (green-yellowish discoloration) and also shows the Lakshana Vivarnata. (discoloration)

According to Vaghbhata

Vagbhtacharya observes the Samprapti (Pathogenesis)that he states Kopanirmalaha, which means Doshas' Kopana,(aggravated doshas) and the similar mechanism of manifestation of the disease is known as Charaka.

Samprapti Ghataka (Pathogenic factor)

- Dosa Pitta Pradhana Tridosa (mainly Sadhaka Pitta)
- Dusya All Dhatus including Oja
- Agni Jatharagni, Dhatwagni
- Srotas(channels) Rasavaha, Raktavaha
- Srotodushti Sanga, Vimargagamana
- Udbhavasthana(place of origin)
 Amashaya, Hridaya
- Sanchara(stage of dissemination) Sarva Sharira
- Vyaktasthana (manifestation) Twak

Vyadhi

- Swabhava(nature) Cirkari(Chronic)
- Roga Marga (path)- Madhyama Roga Marga

Types of Pandu⁴-

- 1. Vataja Pandu: symptoms such as blackish/pale discoloration, dryness, body ache, discomfort, sense of pricking, tremors, flank and head pain, constipation, swelling, abdominal distention, loss of control, giddiness, etc.
- 2. *Pittaja Pandu*: fever, sense of burning, hunger, dizziness, yellowing of urine and feces, sweating, affection for cold, anorexia, bitterness of the throat, hatred of hot and sour food, tiredness, giddiness, etc.
- 3. *Kaphaja Pandu*: body heaviness, excessive sleep, fatigue, pallor, excessive salivation, goose bumps, tiredness, fainting, lethargy, cough, laziness, sleeplessness, sore throat, urinary paleness, swelling, mouth sweetness, etc.
- 4. Mridbhakshanajanya Pandu: kapha vitiates Madhura Rasa dirt, pitta vitiates lavana Rasa, and vata dosha vitiates Rasa. Bala, Varna, jathargni, satva and *kanti*(glow) are killed, indrivas are weakened and unable to adequately collect their arthas.
- 5. Sannipataja Pandu: Miscellaneous symptoms.

Sadhyasadhyata (Prognosis)

Sharir dhatus (tissues) becomes ruksha (dry) and decreases in bala(strength) Varna (complexion) owing to the chronicity of Pandu. Developing a Pandushotha.(inflammation) Rogi (patient) sees everything that is yellow, i.e. the vision turns yellow. Rogi (patient) has constipation. Rogi (patient) moves by loose stools, which are greenish kaphayukta stools. Rogi (patient) Deena, that is. Your body looks like it's covered in a white thing. Who has *vamana*,(emesis) *murcha* (syncope) and *trushna*(thirst) *pain - Rogi* turns pale and the volume of blood reduces.

When *Rogi* suffers from *jwara* (fever) and *atisara* (diarrhea), when there is oedema of the end organs, i.e. in the middle portion of the hands, feet and face and emaciation and vice versa, when *Rogi's* teeth, nails and eyes become *Pandu*, when *Pandu Varna* (Pallor coloration) sees everything.

Arishta Lakshana (Fatal signs) of Pandu

Some basic symptoms which provide details about the patient's death have been stated by *Acharya Sushruta*. They are precisely as follows.

- *Pandu* is going to die for people whose teeth, nails, eyes have turned yellowish white and who see it all as yellow or white.
- Many who frequently faint, who suffer from lack of awareness and who suffer from diarrhoea and fever will die.
- Those with limb edema, intestinal distention, swelling of the rectum, penis and scrotum will also die from Pandu.

Management and Treatment of Pandu⁴

Nidana Parivarjana (avoiding the cause):

It is important to prevent the Hetu(cause) clarified in *Pandu*.

Snehana karma (oleation):

In *Pandu Rogi*, there is *sneha-abhava*,(lack of oiliness) and the doshas are adhered to in the *shakas*(*extremities*). So it is important to put the *doshas* into *koshta*(bowel) and right *rukshata*(dryness), *snehan*.(oiling) It suggests *bahya* and *abhyantara snehana*

(internal and external oleation).

Vamana and *Virechana Karma*: (Emesis and purgation)

The *doshas* come into *koshta* (bowel) after samvaka snehan(oleation) and swedana (Sudation) and are removed from the body by vaman or virechana (Emesis and purgation) as per their gati. Virechana (**purgation**) is the finest *Pitta dosha* shodhanopakarma. So. virechana (purgation)in Pandu is the most The numerous appropriate. drugs mentioned for *Virechana* (purgation)in Pandu.

Shamana Chikitsa (Pacifying treatment):

It uses Vanaspatika and Khanija yoga (herbo-mineral preparations), Asava-Arishta (Fermented medicines) and Avleha. (Medicated semisolid preparation),

Vishesha chikitsa (Special treatment) :

The form of Vatika handled with snigdha guna (unctuousness), Pittaja by Tikta Rasa yukta(Bitter) and shitaveerya (cold in potency) aushadha,(medicine) Kaphaja by Katu-tikta Rasa yukta and mishrit guna aushadha ,ushna veerya(hot in potency) aushadha and sannipataja.

Mridbhakshana pandu: (*Pandu* by eating dust),

The ingested soil should be removed out of the body by *Tikshna virechana* according to *bala* (strength) of *Rogi*. After *sharira shodhana* (Purification) by *virechana karma* (Purgation) medicated *ghruta* should be used to bring strength in the body.

Textual medicine References for Pandu

- *Loha Bhasma* With honey and ghee
- *Shunti churna* With *Loha Bhasma* (iron preparation)
- Loha bhasma With Gomutra (Cow urine)
- *Ela's* (cardamom) powders, *Jeeraka* (cumin seeds), *Bhumyamalaki* (Phyllanthus)

Niruri) and *Sita* (sugar) should be taken in equal amounts and blended with ghee. Taken at the beginning of the morning,

• *Haridra churnam* (turmeric powder) early in the morning with curds.

Best medicines for Pandu

- Lohasavam
- Lodhrasavam
- Drakshasavam
- Draksharishtam
- Rohitakarishtam
- Mridwikasavam
- Punarnavasavam
- Pippalyasavam
- Guluchyadi Kashayam
- Drakshadi Kashayam
- Ardhavilwam Kashayam
- Patolakaturohinyadi Kashayam
- Punarnavadi Kashayam
- Mahatiktakam Kashayam
- Vasaguluchyadi Kashayam

Effective anti-anemia decoctions from Sahasrayogam

Pandu Parvikardrakadi Kashayam Ingredients –

Parvika / Vacha – Acorus calamus Ardraka – Zingiber officinale / Ginger Kakamachi – Solanum nigrum Mandukaparni – Centella asiatica

Method of use:

1. Prepare the decoction with the ingredients listed above and prescribe it for internal use.

2. Take the decoction of sesame seeds pounded in *Bhringaraja's* milk, i.e. mixed with iron ash, *Eclipta Alba*

Indications -

Pittaja Pandu – anaemia caused by predominant vitiation of *pitta*. **Ref** – *Sahasrayogam, Parishishta Prakarana*

• Vyoshadi Kashayam

Ingredients -

Vyosha – powder of Piper longum, Piper nigrum & Zingiber officinale Ajamoda – Trachyspermum ammi Tavidvama / Punarnava – Boerhavia diffiusa Karim / Ikshu mula – roots of Saccharum officinarum Chirimbu – rust of iron Haritaki – Terminalia chebula Bala mula – root of Sida cordifolia *Puliyarambu / Chincha patra vrinta – petiole of* leaf of Tamarindus indica or Vrikshamla – Garcinia indica Purana kitta – old slag / rust of iron Jambira – Citrus lemon Nisa / Haridra – Curcuma longa Vajra lata / Asthi samhara Cissus quadrangularis Tripadi / Hamsapadi – Adiantum philippense **Indications** – Anaemia **Ref** – Sahasrayogam, Parishishta Prakarana • Panduhara Kshaya **Ref** – Sahasrayogam, Kashaya Prakarana, • Punarnavadi Kashayam Ingredients -Punarnava – Boerhavia diffiusa Nimba – Azadirachta indica / neem Patola – Trichosanthes dioica Shunti – Zingiber officinale Tikta / Katukarohini – Picrorhiza kurrooa Amruta / Guduchi – Tinospora cordifolia Darvi / Daruharidra – Berberis aristata Haritaki – Terminalia chebula Indications -

Swelling all over the body, fever, cough, dyspnoea, colic and complicated cases of anaemia

• *Tintrinyadi Kashayam* Ingredients:

Tintrini taruna parna salaka – veins of tender leaves of Tamarandus indica Lohakitta / Mandura – slag / rust of iron Vijaya / Haritaki – Terminalia chebula Punarnava – Boerhavia diffiusa Ikshu – Saccharum officinarum Bilwa – Aegle marmelos Method of use – PathvAhara⁵ Decoction should be prepared with the above mentioned herbs and Administered along with Jaggery. Indications – treatment of anaemia

Food - old wheat, rice (shashtika), barley, jowar, green gram and pea.
Vegetables - Dudhi (Bottle Gourd) patola (Trichosanthes dioica), bimbi (Cephalandra indica), chakvat, (Chenopodium album) palak(spinach), shepu,(Anethem sowa) jeevanti (Leptadenia reticulata) Haridra(Curcuma longa), punarnava (Boerhavia diffusa) Non-veg - Shingada fish, goat meat, jangal (Arid land) meat
Fruits - Amla, grapes, anjeer (Fig), chikoo (Sapota), banana, mango, khajur (Phoenix sylvestris) pomogranate, papay
Roots -Shingada, kamalakunda, lasuna(allium sativum), ginger.
Milk productsCow milk, ghee, navneeta(butter) takra(Buttermilk)
Liquids – Gomutra(Cow urine), laja manda (Parched rice) koshna jala(Luke warm water), laghu panchamula siddha jala.
Madya varga – Sauvira (Fermented liquid) and tushodaka (Fermented bean-husk water). Kshara varga - yava kshara
Vihara: Light exercise

Apathy Ahara (unwholesome)::

Shaka varga - *Shaka varga* (vegetables) *,Shimbi* (pulses) *varga* - *Matara*, *masha* (black gram), *pinyaka* (Til prepared Oil cake)

Dal -*Til*(sesame oil), sharshapa (brassica campestris)

Tail varga - Bijowar tail

Drava varga (liquid diet) - Atyambu pana(excessive liquid intake) madyapana(Alcohol intake) Vihara: Diwaswapna(sleeping during day time), atapseva(sun bath), ativyayama(excessive exercise), vegavidharana (suppression of urges), chinta(anxiety), shoka(grief), krodha(anger). Agni(fire), pittakara ahara sevana, maithuna(intimancy), ayasa(tiredness).

DISCUSSION

Pandu is a Shabda of Varnatmaka and signifies color loss. The references given in the Ayurvedic classics are Shweta Varna (whitish coloration), Ketaki Dhuli Sannibha (colour of pollen grains of Ketaki flower) and Peeta Varna. Pandu is a Rasa Raktavaha Sroto Vikara (disorders of plasma and blood) in which paleness of the skin, nails, eyes, face etc. is seen and Lakshanas (signs and symptoms) are found such as Alparakta,(diminished blood *Alpamedas*,(diminished fat) *Balaheena* (diminished strength), *Varnaheena*,(diminished colour) *Alasya*(sleepiness), *Nisara*, reduced sensory and motor function, lack of energy, etc. *Pandu Rogi* lacks lust and becomes a survivor of body dryness. In *Pandu Rogi, Balakshaya* (Diminished strength) *and Ojo gunakshaya* are also used. It is a *Pitta Pradhana Vyadhi* with another *Dosha's* participation. Like *Harita(greenish)*, *Haridra*,

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(yellowish) ,Bahuvidha Varna, Krishna Pandu(blackish and pallor), Arunangata, Svetata(whitish) , and Svetavabhasta, Charaka defines skin color in Pandu. At Sushruta, Panduta is told of Danta and Nakha.(teeth and nails).

In Samhita Hrudaya Kashyapa Spandanam(Palpitation), Sveta, Akshi, Nakha Vakrata(Whitish sclera, nails) in Pandu is listed as the *Purvarupa* (Premonitory signs) of *Pandu* told in Ayurvedic classics can be equated in modern medicine with the symptom palpitation stated in Anemia. There are other signs in *Pandu*, such as Rukshata(dryness), Swedabhava(loss of prespiration), Shrama (exertion), Mrudbhakshana (intake of dust), Akshi Kutha Shotha, (pain in eye orbit) and Avipaka (indigestion). In Pandu, because of Rasa Dhatu Dushti, Rukshata (dryness) is seen, and Twak (skin) is Rasa Dhatu's Upadhatu. Since symptoms such as Swedabhava(loss of prespiration), are consistent with Medovaha Srotas and Raktavaha Srotas, Shrama (exertion) is given in Pandu. In anemia, papilloedema can be identified in Akshikutha Shotha and angular stomatitis (Avipaka) is a major symptom of moderate anemia.

Even though it is listed as a form of *Pandu*, mostly due to unhygienic environments and polluted foods, different types of parasites enter the body and consume food and nutrients, people will not generally take mud for food. Hook worms, in fact, suck human blood directly and are known to be the primary source of iron deficiency anaemia in undeveloped countries.

All the Acharya, excluding Sushruta and Harita,

CONCLUSION:

It is possible to associate iron deficiency anemia with modern science focused on *Nidana* (Pathogenesis) and *Lakshana* (Sign and symptoms) *Pandu*. Because of *Rasa Dhatvagni Mandyata*, *Pandu* demonstrated its immediate effect on *Rasa Raktavaha Sroto Dushti Lakshana*. The people of *Vata Pitta Prakruti* and those who obey the people of *Pittakara Nidana* are more vulnerable to *Pandu*.

agree with the view of *Charaka* and accept the five forms of Pandu. Mrudbhakshana (intake of dust) is a Nidana rather than a variety of Pandu, according to Sushruta. As the signs and symptoms and treatment of Mrudbhakshanajanya (intake of dust) Pandu are distinct from other varieties, all others take it as a separate class. In *Pandu*, *Sushruta* covers *Kamala* and its varieties. *Panduta* (pallor) can be known as *Pandu's Pratyatma Lakshana*(Cardinal signs and symptoms) Acharya Charaka quoted Arohana Ayasa as Pandu's Visesha Lakshana *(specific treatment)*. *Raktalpata* (loss of blood) can also be known to be *Pandu's Pratiniyata Lakshana* (Disease specific symptoms). In *Pandu*, both qualitative and quantitative declines in Rakta (blood) are seen.

Discussion of Pandu's Samprapti (Pathogenesis) includes the examination of different Nidana, Dosha, Dushya, Srotas, Agni, *etc. Pandu* is regarded by *Acharya Charaka* as a *Rasa Pradoshaja Vikara*, and *Sushruta* considers it a *Rakta Pradoshaja Vikara* (blood disorders) But both think Dosha is Pitta, the key one concerned. It is clarified in our classics that Ranjaka Pitta gives Rasa Dhatu color and helps to shape *Rakta Dhatu*. Because of the Nidana, (Pathogenesis) when the Pitta Vruddhi takes place, the *Dravatwa* of *Pitta Dosha* in particular gets exacerbated and the Jatharagni subsides more, exactly like that of spilled hot water. Sthana Samsraya (deposition) in Twak (Skin) earned the Vitiated Dosha as it is the Upadhatu of Rasadhatu.

Present lifestyle that has disrupted *agnimandya*, *vidhagdhaajirna*, and eventually contributes to *Pandu's* food habits. In triggering and aggravating *Pandu*, low socio-economic status, emotional stress and pressure play an important role. Owing to their unnecessary hard work and pressure contributing to *Pandu*, married individuals were more vulnerable to *Pandu*. *Pandu*, with the participation of *Vata* and

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Kapha Dosha, is a Pitta Pradhana Vyadhi. Both Pandu are curable or manageable in the acute stage, but they are incurable in the chronic stage. Nidana Panchaka's analysis would help to understand Nidana (causative factor), Purvarupa (Premonitory signs and symptoms) Rupa(Monitory signs and symptoms), aggravating causes, reliving factor in Pandu

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