

## Ayurvedic Management of Iron Deficiency Anaemia- A Case Report

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### ABSTRACT:

“*Raktham Jeeva iti Sthiti*” which means the *Jeeva* (life) of a person resides in *Raktha* (Blood), any severe impairment or loss of Blood can lead to Death. Hence *Pandu roga* which leads to loss of blood is of a major concern regarding its prevention and cure. The disease *Pandu Roga* is said to be *Rasa Pradoshaja Vyadhi* and also a *Santarpanajanya Vyadhi*. *Pandutha* means Pallor which is the characteristic feature of all five varieties of *Pandu roga*. The general symptoms of *Pandu roga* are *Pandutha* (Pallor), *Shrama* (Fatigue), *Shwasa* (Breathlessness), *Arohana Ayasa* (Exertional Dyspnea), *Hridrava* (Palpitations) etc. All these symptoms closely resembles with Anaemia. Globally Iron deficiency is the most common cause for Anaemia. In this present case series a 46 year male patient presented with the symptoms of *Pandu* and was treated successfully with the help of *Ayurvedic* Medications. The signs and symptoms along with Haemoglobin, MCV, MCH, MCHC, Serum Ferritin and Serum Iron were assessed before and after treatment. There was significant improvement observed after the treatment.

**KEYWORDS:** Ayurveda, Haemoglobin, Iron Deficiency Anaemia, *Pandu*, *Raktha*.

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### INTRODUCTION:

*Pandu Roga* is explained in all *Ayurvedic* classical texts. *Acharya Susruta* has said that “*Raktham Jeeva iti Sthiti*” which means the *Jeeva*(life) of a person resides in *Raktha*(Blood), any severe impairment or loss of Blood can lead to Death. [1] Hence *Pandu roga* which leads to loss of blood is of a major concern regarding its prevention and cure. The disease *Pandu Roga* is said to be *Rasa Pradoshaja Vyadhi*<sup>2</sup> and also a *Santarpanajanya Vyadhi*. [3]

*Panduta* means Pallor, it is the *Pratyatma Lakshana* (Characteristic sign) of all varieties of *Pandu* which presents all over the body and commonly observed in palpebral conjunctiva, skin, face, nail and urine. [4] *Pitta* is said to be the main *dosha* involved in the manifestation of the disease. *Ati amla & lavana ahara sevana* (consumption of excessive sour and salty food), *Tikshna ahara* (hot & spicy food), *Viruddha ahara* (improper diet/ incompatible foods), *Kshara vidahi ahara* (spicy diet), *Madya* (Alcohol Abuse) *Ati*

vyayam (excessive exercise/work), *Ati vyavaya* (excessive sexual act), *Diwaswapa* (Day Sleep), *Chinta* (Stress) and *Krodha* (excessive anger) are the common causative factors for *Pandu*.<sup>[5]</sup>

The *Samprapti* (Pathogenesis) includes vitiation of *Pitta* and that leading to *Kshapana* (Destruction) of *dhatu*s especially *Rakta*. *Alpa Rakta* leads to *varnahani* and *Pandutha* (Pallor) all over the body. Due to *strotavarodha* in *Rasavaha strotas*, *shaithilya* (impairment) occurs in further *dhatu*s and leading to *Ojo Kshaya*, *Bala Kshaya* and *Sneha Kshaya*.<sup>[6]</sup>

The Clinical features of *Pandu* includes *Pandutha* of *netra-twak-nakha-anana* (Pallor in conjunctiva, Skin, Nail, Face), *Shrama* (Fatigue), *Brahma* (Fainting), *Shwasa* (Breathlessness), *Aarohanayasa* (Exertional Dyspnoea), *Durbalata* (Weakness), *Shishira Dwesha* (Intolerance towards cold) etc. There are 5 types of *Pandu* i.e. *Vataja*, *Pittaja*, *Kaphaja*, *Sannipataja* and *Mruthbakshana Janya Pandu*. *Chikitsa* (Treatment) includes *Shodana*, many herbo-mineral preparations and *Pathya-Apatya* has been explained by *Acharya Charaka*.

Hypochromic anaemia due to iron deficiency is the most common cause of anaemia the world over. It is estimated that about 20% of women in child bearing age group are iron deficient, while overall prevalence in adult male is about 2%.<sup>7</sup> It is the most important cause of Microcytic Hypochromic Anaemia in which all the three red cell indices i.e. MCV, MCH & MCHC are reduced due to defective haemoglobin synthesis.<sup>[8]</sup>

As per modern science management includes to find out underlying cause for Iron deficiency and to treat it. It includes Iron & Vitamin C supplements, Anti-Helminthics and Diet therapy. But still permanent cure is not seen in many cases and recurrence is high. In Ayurveda large

number of formulations like *Navayasa Loha*, *Punarnava Mandura*, *Vidangadi Lauha*, *Dhatri Loha* etc,<sup>[9]</sup> has been explained which has the combined actions of iron & Vitamin C supplementation, *Rasayana*, *Krimigna*, *Deepana* and *Vatanulomana* which helps to combat the underlying pathology.

#### CASE STUDY:

A Male patient aged 56 years, Farmer by occupation came to the OPD with the complaints of Generalised weakness, Breathlessness on doing Minimal Physical activities, Pallor, Loss of appetite, Excessive thirst, and muscle cramps since 2 months. No history of DM, HTN or any other systemic illness. No history of recent surgery or bleeding disorder.

#### Physical Examination:

- General Appearance: Pale looking
- Built: Moderate
- Weight: 62 Kgs
- Height: 160 cms
- BMI: 24.2
- Pallor: +++
- Icterus: Absent
- Clubbing: Present
- Cyanosis: Absent
- Oedema: Periorbital swelling and mild bilateral pedal oedema

#### Personal History:

- Appetite: Reduced
- Bowel: Normal, once/day
- Micturition: 4-5 times per day
- Sleep: Sound
- Diet: Vegetarian
- Habits: Tea/Coffee twice a day. No other addictions

#### Vitals:

- Blood Pressure: 124/78 mmhg
- Pulse: 112 bpm, Tachycardic
- Temp: 98.4 F
- SPO2: 98%

- Respiratory Rate: 22 cycles/min

### Systemic Examination:

CNS: Well oriented to place, person and time. Intact Higher mental functions. No sensory deficits.

CVS: S1 S2 Heard, No added sounds, HR: 112 bpm – Tachycardia

RS: b/l symmetrical air entry, no added sounds, RR: 22 cycles per minute – Tachypnoea

P/A: Soft, Non tender, No organomegaly.

### Investigations done during first visit: 03/08/2021

- Haemoglobin: **5.0 gms%** (Reduced)
- RBC Count: **3.39 Million/Cumm** (Reduced)
- Total Count: 7400 Cells/cumm
- DC: WNL

- PCV(Haematocrit): **17%** (Reduced)
- MCV: **51 fL** (Reduced)
- MCH: **14 Pg** (Reduced)
- MCHC: **28 g/dl** (Reduced)
- Platelet Count: 2.35 lakhs/cumm
- Serum Ferritin: 37 ng/ML (Reduced) Serum Iron: 50 mcg/dL (Reduced)
- Peripheral Blood Smear: **Microcytic Hypochromic Anaemia**

1.1. **Diagnosis:** *Pittaja Pandu* (Iron Deficiency Anaemia)

### THERAPEUTIC INTERVENTION:

After thorough physical and systemic examination along with laboratory investigations, the treatment was planned to correct the Iron deficiency & Haemoglobin levels and aimed at correcting cause. (Table 1).

**Table 1: Treatment Chart:**

Sl No	Formulation	Dose	Anupana
First Visit – 03/08/2021			
1	<i>Navayasa Loha</i>	1-0-1 A/F	<i>Ushna Jala</i>
2	<i>Arogya Vardhini Rasa</i>	1-0-1 A/F	<i>Ushna Jala</i>
Second Visit – 12/08/2021			
1	<i>Navayasa Loha</i>	2-0-2 A/F	<i>Ushna Jala</i>
2	<i>Arogya Vardhini Rasa</i>	1-0-1 A/F	<i>Ushna Jala</i>
Third Visit – 14/09/2021			
1	<i>Navayasa Loha</i>	1-0-1 A/F	<i>Ushna Jala</i>

**Table-2: Patya-Apatya:**

<i>Patya</i>	<i>Apatya</i>
<ul style="list-style-type: none"> <li>Vegetables like Carrot, Beetroot;</li> <li>Green leafy vegetables like Spinach, Fenugreek etc;</li> <li>Mudga (Green Gram)</li> <li>Fruits: Pomegranate, Pappaya, Banana.</li> <li>Milk, Ghee.</li> </ul>	<ul style="list-style-type: none"> <li>Ati Ushna Teekshna Ahara (Fried/Spicy food)</li> <li>Tila, Kullata, Maricha</li> <li>Diwaswapna (Day Sleep)</li> <li>Ati Atapa Sevena (Exposure to Excessive Sunlight)</li> <li>Chinta(Anxiety), Krodha(Anger)</li> <li>Ativayayama (Excessive Exercise)</li> </ul>

**Table 3: Grading of Subjective Criteria:**

<b>1. <i>Pandutha</i> (Pallor)</b>	
Absent	0
Mild	1
Moderate	2
Severe	3
<b>2. <i>Akshikoota Shota</i> (Periorbital oedema)</b>	
Absent	0
Mild	1
Moderate	2
Severe	3
<b>3. <i>Agnimandya</i> (Appetite)</b>	
Absent	0
Mild	1
Moderate	2
Severe	3
<b>4. <i>Daurbalya</i> (Fatigue)</b>	
Absent	0
Mild (Occasionally in normal activity )	1
Moderate (Persistent in heavy activity )	2
Severe (Persistent in normal activity)	3
<b>5. <i>Shwasa</i> (Dyspnoea)</b>	
Absent- No difficulty	0
Mild (Occasional on Exertion)	1
Moderate (On walking Upstairs/ Quick movments)	2
Severe (On minimal exertion/ on rest)	3
<b>6. <i>Pindikodwestana</i> (Leg Cramps)</b>	
Absent	0
Mild (leg cramps during night)	1
Moderate (Leg cramps during night and during exertion)	2
Severe (Leg cramps throughout the day)	3

**Objective Parameters:**

1. Haemoglobin
2. RBC
3. MCV
4. MCH
5. MCHC
6. Serum Ferritin
7. Serum Iron

Table- 4: Observation &amp; Result:

Sl No	Parameters	First Visit 03/08/2021	Second Visit 12/08/2021	Third Visit 14/09/2021	Fourth Visit 30/09/2021
<b>Subjective Parameters</b>					
1	<i>Pandutha</i> (Pallor)	3	3	1	0
2	<i>Akshikoota</i> <i>Shotha</i> (Periorbital Oedema)	3	2	1	0
3	<i>Agnimandya</i> (Appetite)	2	2	0	0
4	<i>Daurbalya</i> (Fatigue)	3	3	1	0
5	<i>Shwasa</i> (Dyspnoea)	3	2	0	0
6	<i>Pindikodwestana</i> (Cramps)	2	2	1	0
<b>Objective Parameters</b>					
1	Haemoglobin	5.0 gms%	6.0 gms%	11.7 gms%	13.8 gms%
2	RBC Count	3.39 million/cumm	-	-	4.25 million/cumm
3	MCV	51 fL	-	-	80 fL
4	MCH	14 Pg	-	-	30 Pg
5	MCHC	28 g/dl	-	-	32 g/dl
6	Serum Ferritin	37 ng/MI			92ng/MI
7	Serum Iron	50 mcg/dL	-	-	140 mcg/dL

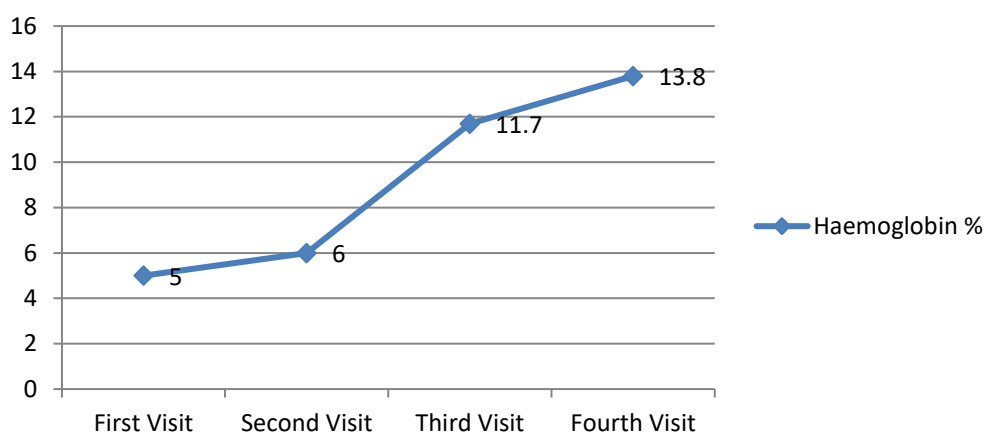
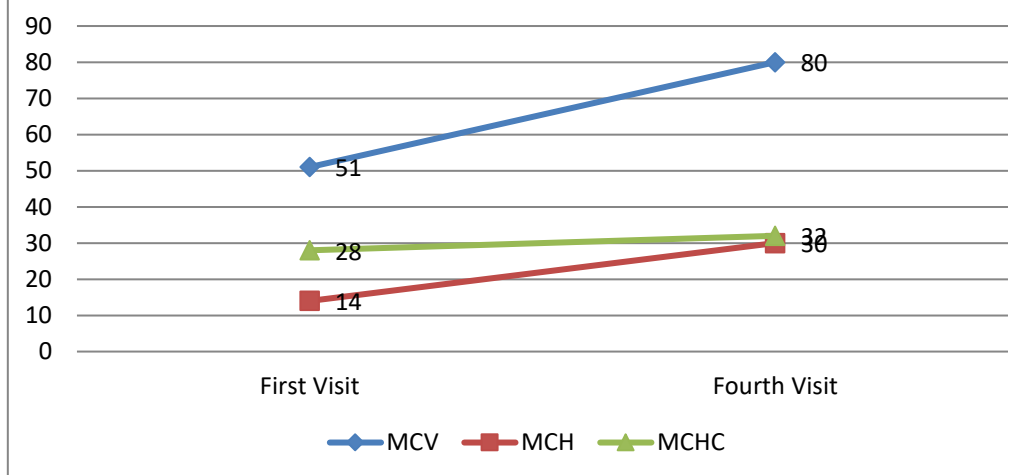
Table 5: Ingredients of *Navayasa Loha* <sup>[13]</sup>

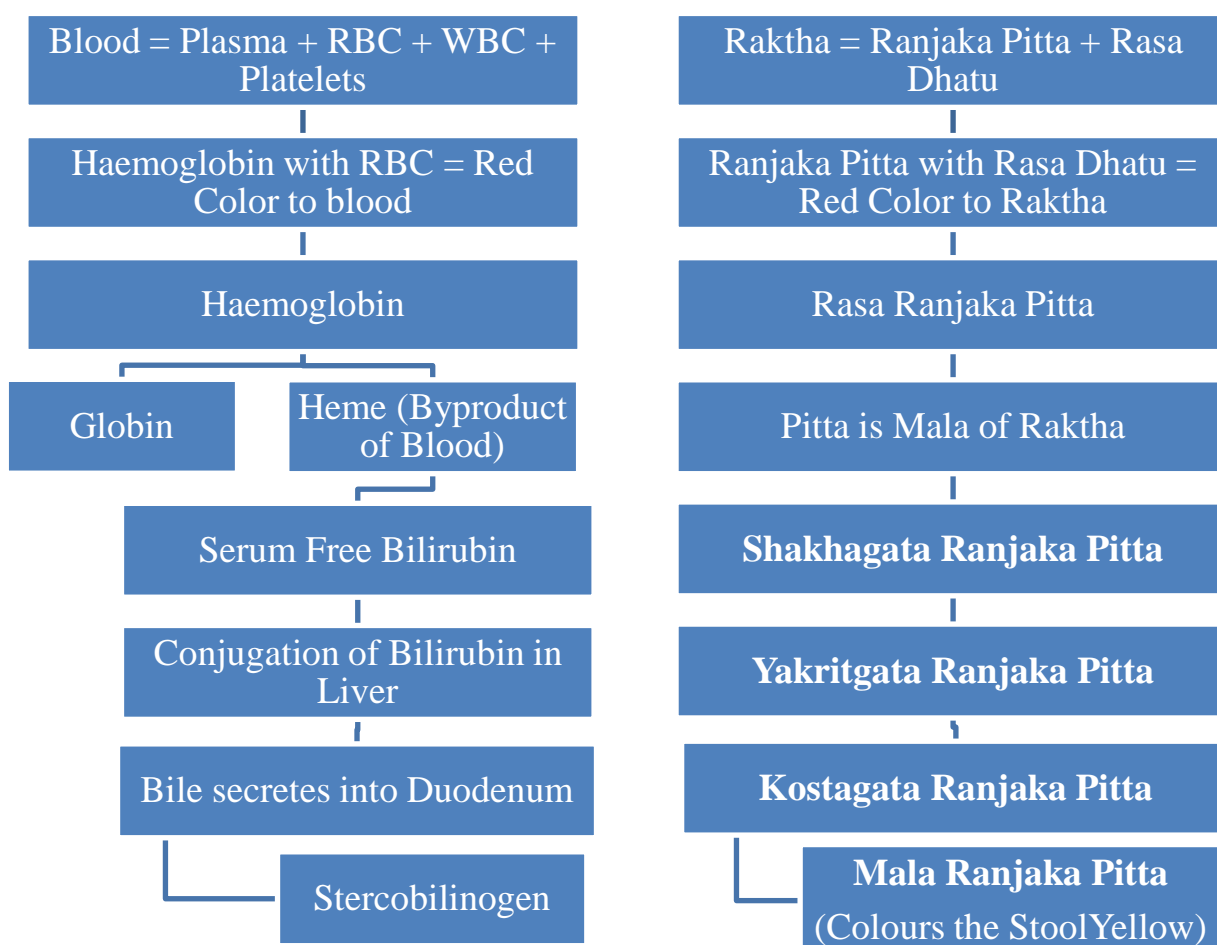
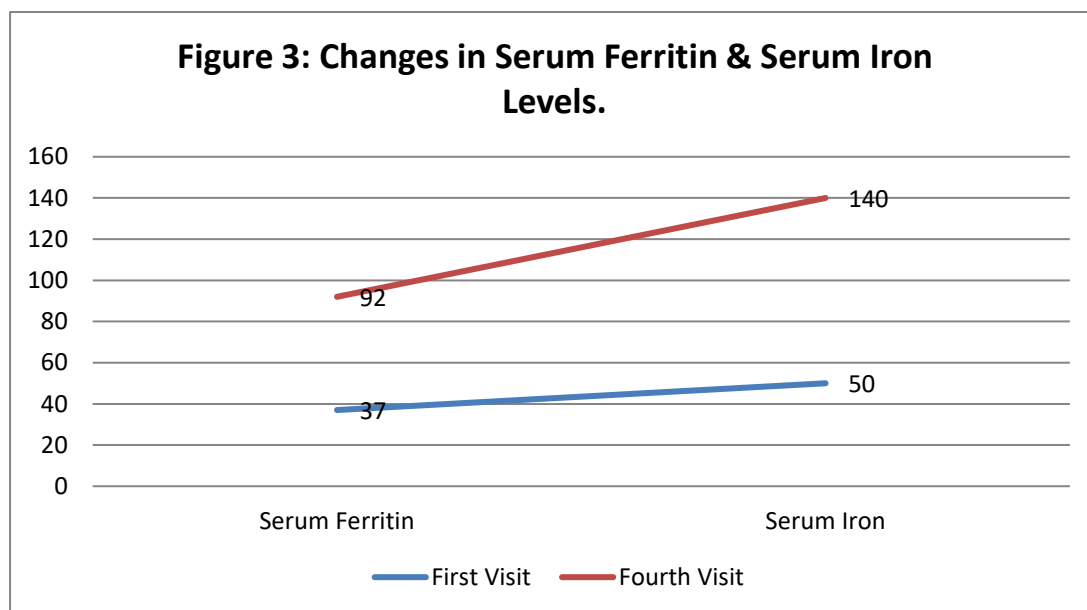
Ingredients	Scientific Name	Quantity
<i>Ayas (Loha Bhasma)</i>	<i>Ferrous compound</i>	9 Parts
<i>Vidanga</i>	<i>Embelia ribes</i>	1 Part
<i>Chitraka</i>	<i>Plumbago zeylanica</i>	1 Part
<i>Musta</i>	<i>Cyprus rotundus</i>	1 Part
<i>Amalaki</i>	<i>Phyllanthus emblica</i>	1 Part
<i>Haritaki</i>	<i>Terminalia chebula</i>	1 Part
<i>Vibhitaki</i>	<i>Terminalia bellirica</i>	1 Part
<i>Pippali</i>	<i>Piper longum</i>	1 Part
<i>Maricha</i>	<i>Piper nigrum</i>	1 Part
<i>Shunti</i>	<i>Zingiber officinale</i>	1 Part

Table 6: Ingredients of *Arogyavardhini Vati* <sup>[14]</sup>

Ingredients	Scientific Name	Quantity
<i>Shuddha Parada</i>	<i>Purified Mercury</i>	1 Part
<i>Shuddha Gandaka</i>	<i>Purified Sulphur</i>	1 Part
<i>Loha Bhasma</i>	<i>Ferrous compound</i>	1 Part
<i>Abhraka Bhasma</i>	<i>Mica Ash</i>	1 Part
<i>Tamra Bhasma</i>	<i>Copper</i>	1 Part
<i>Haritaki</i>	<i>Terminalia chebula</i>	1 Part
<i>Vibhitaki</i>	<i>Terminalia bellirica</i>	1 Part

<i>Amalaki</i>	<i>Phyllanthus emblica</i>	1 Part
<i>Katuki</i>	<i>Pichorrryza kurua</i>	22 Parts
<i>Chitraka Mula</i>	<i>Plumbago zeylancica</i>	4 Parts
<i>Guggulu</i>	<i>Commiphora mukul</i>	4 Parts
<i>Shilajatu</i>	<i>Asphaltum</i>	3 Parts
<i>Nimbapatra Swarasa</i>	<i>Azadirecta indica</i>	Q.S

**Figure 1: Changes in Haemoglobin %**

**Figure 2: Changes in Red Cell Indices**




**Figure 4: Schematic representation of formation of Rakta in comparison with Blood.**



**Figure 5: Schematic presentation of Samprapti of Pandu Roga**

#### DISCUSSION:

Ayurveda has a unique explanation and principles of understanding human physiology and pathology that offers a different perspective in diagnosing and treatment of the disease. *Pandu roga* is said to be *Rasa Pradoshaja vikara* and also *Santarpana janya vyadi*. *Pitta* is considered to be the main *dosha* involved in the manifestation of the disease. There are five types of *Pandu roga* explained in classics. Each type of *pandu roga* has got different origin, pathology and symptoms. *Pandutha* (Pallor) is the common feature among all the types. Hence the above said

statements are applicable for one or the other type of *Pandu roga*.

*Susrutha* opines that *Dhatwagnimandya* of *Rasa dhatu* will further cause the *Dhatwagnimandya* of further *dhatu*s, especially *Raktha* and *Medha*. The symptoms of *Rasa Kshaya* like *Hrid Ghattana* (Palpitations), *Sahate Shabda* (intolerance to sound), *Hrit peeda* (Cardiac pain) etc are also told in *Lakshanas* of *Panduroga*. The difference between *Rasa* and *Raktha* is very thin, the *Kshaya* of *Rasa Dhatu* can also be considered as *Kshaya* of *Raktha*. Hence *Pandu roga* is included under *Rasa Pradoshaja Vikara*.<sup>10</sup>



*Pandu roga* is also considered as *Santarpana janya vyadhi*, this hold good only in *Kaphaja Pandu* which presents with *lakshanas* like *Shota*, *Shwasa*, *Kasa*, *Chardi*, *Gaurava*, *Tandra* etc. along with *Pandutha*. This can be compared with anaemia caused due to lack of erythropoietin (EPO) hormone secreted by juxtaglomerular apparatus of Kidneys. Lack of EPO leads to severe anaemia with symptoms like oedema, breathlessness, cough and vomiting etc.<sup>10</sup>

*Pitta dosha* is considered to be the main culprit in manifestation of *Pandu roga*, this refers to *Pittaja pandu*. It can be compared to Haemolytic Anaemia and Anaemia due to deficiency of Vit B<sub>12</sub> and Folic acid.

As *Rasa* and *Raktha dhatu* are the main *Dhatus* that is defective in *Pandu roga*. It is necessary to understand the formation of *Rasa* and *Raktha Dhatu* in Prior. The concept of *Raktha Dhatu* in *Ayurveda* is very unique. As per *Ayurvedic* classics when *Rasa Dhatu* comes in contact with *Ranjaka Pitta*, it gives colour to *Rasa* and forms *Raktha dhatu*. According to modern physiology haemoglobin present in RBC gives red colour to blood. Hence Haemoglobin when it is within RBC can be compared to *Rasa Ranjaka pitta*. RBC normally have a lifespan of 120 days after which it becomes fragile and splits, haemoglobin is liberated from the RBC; Heme and globulin gets separated. Then this Heme is converted into Bilirubin in blood, this can be compared to *Shakagata Ranjaka Pitta*. Hence *Pitta* is considered to be *Mala* of *Ratha Dhatu*. Further bilirubin gets conjugated in liver and gets eliminated into duodenum as Bile; this can be understood as *Kostagata ranjaka pitta*. In the intestines it helps in digestion and also it colours the stools to Yellow, at this stage it is called as *Mala Ranjaka Pitta*.<sup>11</sup> (Figure 4)

The *Samprapti* (Pathogenesis) includes vitiation of *Pitta* and that leading to

*Kshapana* (Destruction) of *dhatu*s especially *Rakta*. *Alpa Rakta* leads to *varnahani* and *Pandutha* (Pallor) all over the body. Due to *strotavarodha* in *Rasavaha strotas*, *shaithilya* (impairment) occurs in further *dhatu*s and leading to *Ojo Kshaya*, *Bala Kshaya* and *Sneha Kshaya*. (Figure 5).

Based on the understanding of causes and symptoms, *Pittaja pandu* can be compared to haemolytic anaemia and anaemia caused due to deficiency of Vitamin B<sub>12</sub> and Folic acid.

Hypochromic Anaemia due to iron deficiency is the commonest cause of anaemia the world over. It is the most important, though not the sole, cause of microcytic hypochromic anaemia in which all the three red cell indices (MCV, MCH, & MCHC), Serum Ferritin and Serum Iron are reduced and occurs due to defective haemoglobin synthesis. Iron deficiency anaemia develops when the supply of iron is inadequate for the requirement of haemoglobin synthesis. The treatment includes correction of the disorder and iron deficiency.<sup>12</sup>

In this present Study the treatment included oral administration of formulations like *Navayasa Loha* (Table 5), *Arogyavardhini Vati* (Table 6) for a period of 45 days along with suitable diet.

The main content of *Navayasa Loha*, *Ayas* or *Shuddha Loha Bhasma* is a ferrous compound, which is a very important mineral used in the formulation, it promotes *ayu*, *bala*, *veerya*, *Pitta Shamaka* and it is considered to be a *Shrestha Rasayana* (Superior). *Loha* helps in the maturation of RBCs especially in Iron deficiency anaemia. *Vidanga* and *musta* having *krimihara* property helps in eradication of *krimi* (Intestinal Helminthes) which is the commonest cause of anaemia. *Chitraka* and *Trikatu* have *deepana* and *pachana* property (A good appetizer & Digestive) helps in the correction of *Agni*. It

is also *Yakrit Uttejaka* (Choleretic & Chologague action). *Triphala* a well-known *Rasayana*, *Amalaki* which has got a rich source of Vit-C helps in the formation of Haemoglobin and absorption of iron from the intestines.<sup>15</sup>

The contents of *Arogyavardhani Vati* like *Triphala* and *Katuki*, with *Bhasma* (metallic/mineral preparation) and *Kajjali* (mercury sulphur bond) becomes capable for detoxifying due to *Sara Guna* (Mobile) by removing obstruction in *Srotas* (channels). It improves the *Agni*, it is *Rasayana* and *Vatanulomaka*.

There was a significant improvement seen in the symptoms and also investigatory findings like Hb%, MCV, MCH, MCHC, Serum Feritin & Serum Iron after the treatment. Thus the present study reflects the effect of Herbo-Mineral *ayurvedic* fomulations containing *Loha Bhasma* in *Pandu Roga* especially with respect to Iron Deficiency Anaemia. These medications not only acts as the oral supplementation of iron it also helps in correcting the underlying cause and helps further helps in formation of RBC and Haemoglobin.

#### CONCLUSION:

*Pandu* is *Rasa Pradoshaja vyadi* and also *Santarpanjanya Vyadi*. *Pandutha*(Pallor) is common feature involved in all 5 types of *Vyadhi*. Treatment of *Pandu* depends on the cause and type of *Pandu roga*. Detailed understanding of the concept of formation of *Raktha*(Blood) and the disease *Pandu* (Anaemia) gives us the clue to plan the treatment for different types of Anaemia.

In this present case which was diagnosed as *Pittaja Pandu* (Iron deficiency Anaemia) bases on the symptoms and Blood investigations, Oral administration of *Navayasa Loha* and *Arogyavardhini Vati* has shown effective results.

#### LIMITATION OF STUDY:

This is a single study and for its concrit conclusion the same protocol should be tried in more number of patients.

#### CONSENT OF PATIENT:

The informed written consent has been taken for procedure and publication of the reports without disclosing the identity of a patient.

#### REFERENCES:

1. Trikamji J. Susrutha Samhitha Sutra Sthana 14/66. Chaukhambha Orientalia, Varanasi: 2019. Pp 66.
2. Trikamji J. Charaka Samhitha Sutra Sthana 28/10. Chaukhambha Orientalia, Varanasi: 2010. Pp 179.
3. Trikamji J. Charaka Samhitha Sutra Sthana 23/05. Chaukhambha Orientalia, Varanasi: 2010. Pp 122.
4. Trikamji J. Susrutha Samhitha Uttarantra 44/4 Dalhana Commentary. Chaukhambha Orientalia, Varanasi: 2014. Pp 729.
5. Trikamji J. Charaka Samhitha Chikitsa Sthana 16/7. Chaukhambha Orientalia, Varanasi: 2010. Pp 527.
6. Trikamji J. Charaka Samhitha Chikitsa Sthana 16/4. Chaukhambha Orientalia, Varanasi: 2010. Pp 526.
7. [www.aafp.org/afp](http://www.aafp.org/afp)AmericanFamilyPhysician671 [Last Accessed on 07/11/2021]
8. Karagülle M, Gündüz E, Mutlu FŞ, Akay MO. Clinical significance of reticulocyte hemoglobin content in the diagnosis of iron deficiency anemia. Turkish J Hematol. 2013 Jun 5 [cited 2021 Nov 7];30(2):153-6.
9. Samal J. Ayurvedic preparations for the management of Iron Deficiency Anemia: A systemic review. AYU 2016;37(3):163.
10. Aruna, Essentials of Kayachikitsa, Sri Basavannappa Halshetty Publications; First Edition 2008. Pp45
11. Aruna, Essentials of Kayachikitsa, Sri

- Basavannappa Halshetty Publications;  
First Edition 2008. Pp50
12. Mohan H, Text book of Pathology,  
Jaypee Brothers Medical Publishers Ltd;  
Sixth Edition 2010. Pp 295
13. Trikamji J. Charaka Samhitha Chikitsa  
Sthana 16/70. Chaukhambha Orientalia,  
Varanasi: 2010. Pp 530.
14. Sarashetti Prof. RS, Simpi CC, Sandeep  
NM, Kanthi Prof. VG. Screening of free  
radical scavenging activity of  
arogyavardhini vati. Int J Res Ayurveda  
Pharm. 2013 Aug 26;4(4):555-9
15. Sharma DT, V. DCM, Madalageri DMM.  
Navayasa Lauha as an herbomineral

preparation and their utility in different  
disease. J Ayurveda Integr Med Sci  
[Internet]. 2018 Aug 19;3(4):158-61.

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