



Case Study

A CASE STUDY HIGHLIGHTING THE IMPACT OF *DADHIMADI GHRUT* ON *PANDU ROGA W.S.R.* TO IRON DEFICIENCY ANEMIA

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ABSTRACT

Context: In India, the most common cause of anemia is a nutritional iron deficiency. The nearby term for Iron Deficiency Anemia (IDA) in Ayurveda is *Pandu Roga*. Due to the high prevalence of IDA in society and the frequent side effects of oral allopathic iron preparations, Ayurvedic ghee was given in a case report of a woman suffering from IDA in order to evaluate the efficacy of *Dadhimadhi Ghrut*, an Ayurvedic remedy. **Aim:** Evaluation of role of *Dadhimadhi Ghrut* in haemoglobin level and iron binding capacity in a patient suffering from *Pandu* (IDA). **Design:** Case report - Clinical study. **Materials and Methods:** The study was conducted on a woman of IDA for a period of 12 weeks. Clinical features and hematological parameters were documented before, during and after treatment. **Results:** The present study shows that the trial drug *Dadhimadhi Ghrut* is effective to improve clinical features and hematological parameters significantly. The medicine is effective to increase the hemoglobin level g/dL (8.4 -10.1g/dL) in 6 weeks and 3.61g/dL (8.4 - 12.01g/dL) in 15 weeks. No adverse effect of the trial drug was observed during the study. **Conclusion:** The results suggest that *Dadhimadhi Ghrut* is significantly effective in the management of IDA in anemic woman.

INTRODUCTION

Currently, anemia is quite frequent in the general population, with the World Health Organization estimating that 1/2 billion women worldwide suffer from anemia. It has an impact on every population group. Pallor, along with other symptoms, is caused by a decrease in the quantity of haemoglobin and iron binding capacity.

"*Raktham Jeeva iti Sthiti*" signifies that a person's *Jeeva* (life) resides in *Raktha* (blood), and that any serious illness or blood loss can result in death^[1].

Pandu is discussed in all Ayurvedic classical texts. Ayurveda emphasizes both preventive and curative elements. *Pandu* causes the skin to turn white and pallor. It is a disease entity with physical and psychological clinical characteristics similar to other types of anemia.

The fundamental diagnostic criteria of anemia are pallor skin and a reduction in haemoglobin levels.

Ayurveda text describes *Pandu* as *Pitta dosha Pradhan roga* associated with *Rasa* and *Rakta Dhatu*. *Bhrajaka Pitta* is responsible for normal colouration of skin^[2]. The loss of appetite, work load, taking care of family and menstrual cycle plays an important role in *Pandu* (IDA).

Pandu symptoms according to classics are *Panduta* (pallor of skin), *Hatanala* (loss of appetite), *Shwasa* (breathlessness), *Gatrashoola* (body ache), *Gaurvata* (heaviness in body), *Karnachhweda* (tinnitus) etc^[3].

When the disease is manifested the patient suffers from tinnitus, loss of digest ion, debility, malaise, aversion to food, exhaustion, giddiness, pain in body, fever, dyspnoea, heaviness and anorexia. He feels as if his limbs are kneaded, pressed or churned. Moreover, he has swelling on orbit, green complexion, falling of skin hairs, loss of luster, irritability, aversion to cold, oversleep, spitting, diminished speech, on exertion by climbing (stairs etc) he suffers from cramps in shanks, pain in waist, thighs, and legs and lassitude^[4].

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Premonitory symptoms of *Pandu roga* are- palpitation of heart, roughness, absence of sweat and exhaustion^[5].

Samprapti of Pandu

By intake of alkaline, sour, salty, too hot, incompatible and unsuitable food, excessive use of *Nispava*, black gram, oil cake, *Tila* and oil, exercise and sexual intercourse during burning (indigestion) of food, faulty management of evacuative measures and seasons; suppression of natural urges particularly in persons inflicted with sexual desire, anxiety, fear, anger and grief *Pitta* situated in heart is aggravated and propelled by the strong *Vayu* in ten arteries which spread it in the whole body. This *Pitta* located in the space between *Tvak* (skin) and *Mamsa* (muscle) affects *Kapha*, *Vata*, *Rakta*, *Tvak* and *Mamsa* and thereby produces various shades of colours like pale yellow, deep yellow, green in skin. This is called as *Pandu roga*.^[6]

In Pandu, due to irregular/faulty (Pittaprakopaka: *Amla* (sour), *Lavana* (salty), *Katu Rasa* (astringent) food habits and lifestyle choices that have hampered digestion, such as *Atisevana*, *Kshara* (alkaline), *Ushna* (hot), *Tisksna* (sharp), and *Ruksha* (dry), indicate a disturbance in *Agni* (digestion power), which leads to *Mandagni*. *Pitta Dosha* becomes *Dushit* as a result. *Rasa Dhatu* becomes vitiated when *Pitta* is aggravated. It causes *Shaithilyatain Dhatu* (looseness in muscles, etc.) and *Gauravata* (heaviness in the body). Additionally, there was an impact on *Bala* (strength), *Varna* (color), and *Sneha* of *Twak* (skin). This led to a reduction in the portion of *Rasa Dhatu* (*Poshaka Bhaga*), which is in charge of providing nutrition for *Rakta Dhatu* (blood tissue), resulting in improper nutrient intake.

MATERIALS AND METHODS

Selection of drug

Dadhimadhi Ghrut is an Ayurvedic formulated *Ghrut* quoted in *Charak Samhita* for the treatment of *Pandu Roga*.

Dadhimadhi Ghrut with milk was taken as a drug for the present clinical study.

Laboratory investigations

Haemoglobin test

Total iron binding capacity (TIBC)

Assessment criteria

Observations of clinical characteristics and laboratory results were used to evaluate the clinical study's outcomes. The primary metrics used to evaluate the treatment's effectiveness were the ones listed below.

Clinical Assessment

The following clinical findings were assessed before, during, and after the treatment: *Vaivarnata* (pallor), *Daurbalyata* (weakness), *Shrama* (fatigue),

Aruchi (anorexia), *Kopana* or *Adhirata* (irritability), *Hridayaspandana* (palpitation), and *Shotha* (edema).

CASE REPORT

A 25 year old female patient complaining of generalized lethargy, pale skin, body ache, feeling of breathlessness after walking upstairs, puffy face, irritation followed by hair fall from past 6 months. Her menstrual cycle has been regular of 30 days.

On Examination

Physical Examination

General Appearance: Pale looking

Built: Moderate

Pallor Colour ++

Weight: 51kg

Height: 160cm

Icterus: Absent

Clubbing: Absent

Cyanosis: Absent

Oedema: Peri-orbital swelling

Vitals

Pulse rate: 68/min

Blood Pressure: 110/70 mm Hg

SPO2: 98%

Personal History

Appetite: Reduced

Bowel: Normal, once/day

Micturition: 4-5 times per day

Sleep: Sound

Diet: Vegetarian

Habits: Tea once a day

No other addiction

Systemic Examination

Rs-b\l clear

- Cvs- s1, s2, normal
- Cns- Conscious, oriented

Rs-b\l clear

- Cvs- s1, s2, normal
- Cns- Conscious, oriented

Rs-b\l clear

- Cvs- s1, s2, normal
- Cns- Conscious, oriented

Rs-b\l clear

- Cvs – S1, S2, normal
- CNS – Conscious, oriented.

Ashtavidha Pariksha (Eight-fold Patient Examination)

Nadi (Pulse): 68/min

Mutra (Urine)

i) *Matra* (Amount): *Samanya*

ii) *Varna* (Colour): *Samanya*

iii) *Gandha* (Smell): *Samanya*

iv) *Pravrti*: Normal

Mala (Stool): *Nirama Mala*

Jihva (Tongue): *Malavrtta* (Coated) - *Sama*

SHabda (Voice): *Gambhira*

Sparsha (Touch): *Mrdu / Shita / Snigdha / Slakshna*

Drka (Eye): *Pittabha*

Akrti (Appearance): *Samanya*

Dashavidha Pariksha (Aturbala Pariksha)

1. *Prakrti-Vinishcaya*- *Kapha pitta*
2. *Vikriti (Vyadhibala pariksha)*- *Vishama/Samavaya*
3. *Sara*- *Twaka*
4. *Samhanana*- *Madhyama*
5. *Pramana*- *Madhyama*
6. *Satmya*- *Eka Rasa/Sarva Rasa/ Ushna/ Snigdha*
7. *Satva*- *Pravara*
8. *Ahara Shakti*
 - a. *Abhyavaharana Shakti (Matra)*- *Madhyama*
 - b. *Jarana Shakti (Kala)*- *Avara*
9. *Vyayama Shakti*- *Madhyama*
10. *Vaya*- *Vivardhamana* (17-30 years)

Laboratory findings

Hb – 8.4gm/dl

HCT – 26.4%

Laboratory Assessment

| Period | Hb |
|---------|------------|
| 0 Day | 8.40gm/dl |
| 30 Days | 10.10gm/dl |
| 60 Days | 10.90gm/dl |
| 90 Days | 12.01gm/dl |

Drug Review

Dadimadya ghrut Ingredients

| | |
|-----------------|-------|
| <i>Dadima</i> | 160gm |
| <i>Dhanyaka</i> | 30gm |
| <i>Citraka</i> | 40gm |
| <i>Sunthi</i> | 40gm |
| <i>Pippal</i> | 20gm |
| Drugs Ghee | 800gm |

This (*Dadimadya ghruta*) alleviates heart diseases, anaemia, *Gulma*, piles, splenomegaly and disorders of *Kapha* and *Vata*. It is appetizer, alleviator of dyspnoea and cough and is commended in conditions of confounded *Vata* and difficult labour. It also provides progeny to the sterile women^[7].

Dose: 1 spoon (BD) with lukewarm milk.

Total Duration: 90 days

Diet

Pathye- *Draksha*, beetroot, pomegranate, khajur, jaggery, spinach, carrot, raisins, leafy vegetable, milk, etc.

Apthye- *Dahi*, excessive spicy, excessive salt, preservative food, fine flour, pickle, etc.

OBSERVATION

| Date | Hemoglobin (gm/dl) |
|---------------|--------------------|
| 09 April 2024 | 8.4 |
| 17 May 2024 | 10.1 |
| 15 July 2024 | 12.01 |

DISCUSSION

The word *Pandu* denotes whitish or pallid. This condition, known as anemia, is *Pandu* denotes the whitish or pallor coloration of skin which is known as anemia. Mainly iron supplements can be used to treat iron deficiency anemia. *Dadhim* has a good iron binding capacity and an good digestive fire enhancer, appetizer.^[8] Ghee alleviates *Pitta* and *Vata*, is beneficial for *Rasa*, semen and *Ojas*, cooling softening and improves voice and complexion^[9].

By working on *Agni* we can produce give produce quality and proper quantity of *Dhatu*. Pomegranate is rich in iron and vitamin c which is beneficially in anemia. The specific cause of IDA is the poor absorption of iron, vitamin c enhances the absorption of iron. According to the principle of Charak Samhita on *Pandu Roga*, *Dadhimadi ghrut* is beneficial in iron deficiency anemia, and can be considered in treatment as a good digestive fire enhancer as well hematinic preparation.

CONCLUSION

Pandu is *Rasa Pradoshaj Vyadhi* by enhancing the digestive fire and increasing iron binding capacity, one can increase the haemoglobin of blood. *Dadhimadi Ghrut* has ingredients which works on *Agni* are rich in iron content. The present study shows that the drug was more effective in symptoms. In this case report the medicine was found highly significant in anemia (IDA).

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