



## COMPARATIVE STUDY OF MANDOOR VATAK AND FERROUS SULPHATE IN THE MANAGEMENT OF PANDUROGA

Ayurveda

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### ABSTRACT

**Background:** Good health is the fundamental prerequisite to acquire materialistic, social and spiritual upliftment of human being to achieve the four "Purushartha", i.e. Dharma, Artha, Kama & Moksha. Ayurveda, the Traditional Indian system of medicine has advocated curative and preventive measures by prescription on diet, lifestyles, medicine and therapies.

Present study is undertaken to evaluate the etiopathogenesis of Pandu and iron deficiency anaemia, to study the efficacy of Mandoor Vatak in the management of Pandu as compared with ferrous sulphate in iron deficiency anaemia, to study the adverse reaction of Mandoor vatak if occurs.

**conclusion:** From study it is concluded that Mandoor Vatak did not create any kind of side effects. so it can be used as an ideal formulation of Pandu.

### KEYWORDS

Pandu Roga, Mandoor Vatak, Ferrous Sulphate, Anaemia.

### INTRODUCTION

Anaemia is defined as a condition in which Red blood cells (RBC) and their oxygen carrying capacity is inadequate to the physiological demands of the body which vary with sex, age, attitude, smoking status and pregnancy.<sup>2</sup> Prevalence of anaemia in India is 65%-95%. According to Indian Council of Medical Research and National Family Health Survey in India, 87% of pregnant woman suffer from anaemia, more than half women i.e. 55% have anaemia including 39% with mild anaemia, 15% with moderate anaemia and 2% with severe anaemia. Also prevalence of anaemia is very high i.e. 80%-90% in preschool child, lactating women and adolescent girls.<sup>3</sup>

The term anemia was first sound in the Carpus Hippocraticus. It literally means without blood and is derived from Greek word "a" or without and "haima" or blood. The word Pandu is formed from the root dhatu "PADI GATOU" means Gati<sup>4</sup> The disease Pandu is named after the Varna, as it is a mixture of shweta and peeta varna.<sup>5</sup> pandu bhava is more predominant is called Pandu roga.<sup>6</sup> The disease in which Panduthwa is predominant.<sup>7</sup> Predominant features in all Pandu bhedha are Pandu varna.<sup>8</sup> Disease named after Panduthwa.<sup>9</sup>

Anaemia can arise either due to inadequate intake or poor bioavailability of dietary iron or due to excessive loss of iron from the body.<sup>10</sup> Women loose a huge amount of iron in menstruation every month, unawareness about nutrition; low economic conditions are major causes of IDA in India. The pallor is described as

**पाण्डुस्तपीतभागार्धः केतकीधुलसन्निभः ॥ (शब्दार्णवकोश)<sup>11</sup>**

All details about etiopathology, classification, prognosis, treatment of pandu are described in Ayurveda classical samhitas. The most predominating features of pandu is

**केतकीधुलसन्निभः ॥ (शब्दार्णवकोश)<sup>11</sup>**

which is nothing but pallor or paleness of skin, eyes mucus membrane, Anorexia, loss of appetite, fatigue, palpitation, shortness of breath, headache, the symptoms of Pandu, described in our classics are similar to Iron deficiency anaemia. Vataj, pittaj, kaphaj, Tridoshaj, Mrudbhakshanaj Pandu are five types of Pandu. Ayurveda is an ancient Indian system of medicine that makes use of herbs existing in nature and formulates herbal remedies using the inherent power present in these herbs.

### MATERIALS & METHODS:

**1. Source of data:** Patients of either sex diagnosed as Pandu roga were selected from the O.P.D and I.P.D of this hospital. Total 60 patients were selected for study, and 60 patients were divided into two groups

**Experimental group : 30 patients and Control group: 30 patients.**

### 2. Criteria for selection of patients:

**a) Inclusion criteria:** The patients diagnosed as Pandu roga in the age group of 16 – 60 years of either sex and Hemoglobin % below 10gm% and above 7gm%.

**b) Exclusion criteria:** Age less than 16 years & more than 60 years, Pregnancy & Lactation, severe renal / hepatic / cardiac diseases, any continuous blood loss, hematemesis, melena, bleeding piles, anaemia other than IDA.

**ORAL MEDICATION:** GROUP A: Mandoor Vatak (Standard group) and GROUP B: Ferrous Sulphate (Control group)

**DOSE:** Mandoor Vatak – 250mg two tablets twice in a day after meal and Ferrous Sulphate 200mg one tablet once in a day after meal for 60 Days

आरभ्यगुज्जापादाशाल्होमात्राविधानवित्।

गुज्जाद्वितीयपर्यन्तमन्दुरविनियोजयेत् ॥<sup>107</sup>

र.तं.२०/१३९

### Mode of action of drug:

Mandoor Vatak due to its ingredients like Triphala Trikatu possess the quality to prevent the common hazards of oral iron therapy like gastro intestinal upset abdominal discomfort and iron tolerance etc. IDA is treated with iron supplement and Mandoor vatak contains mandoorbhasma which is nothing but iron oxide. Mandoor Bhasma is pittashamak, agnideepak, ruksharaktavardhak and ruchikarak. Gomutra, which is main ingredient of this formulation, works as amapachan in dhatvagni level.<sup>12,1</sup>

### CRITERIA FOR ASSESSMENT

**SUBJECTIVE PARAMETERS:** Shirshool (Headache), Angamarda (Bodyache), Durbalata (Weakness), Bhram (Vertigo), Anannabhilasha (Anorexia), Hrudayspandan (Palpitation), Shwas (Dyspnoea)

**OBJECTIVE PARAMETERS:** Weight, Nakha-Netra-Twak Panduta, Hb%

**ASSESSMENT OF CLINICAL RESULT :** Marked Improvement  $\geq 75\%$  to 100% relief, Moderate Improvement  $\geq 50\%$  to 74% relief, Mild Improvement  $\geq 49\%$  to 25% relief, No improvement  $< 25\%$  relief.

### OBERVATIONS & RESULTS

#### Age:

Most of the patients of this study were found 16-30 age group (33.33%) followed by 31-40 age group (33.33%), 41-50 and 51-60 age group (16.6%) and (23.33%)

#### Sex:

Sex wise distribution shows the maximum patients were Female (93.33%) followed by male patients were (6.66%)

#### Marrital status:

Majority of the patients shown in the table were Married (80%) followed by 16.66% patients were Unmarried and 3.33% patients were Divorced.

#### Income:

Majority of the patients were from Middle income group (95%) followed by Lower (5%).

**Occupation:**

Occupation wise distribution shows that maximum number of patients were house worker (61.66%) and Service (25%), students were (10%)

**Diet Wise:**

Majority of the patients as shown in table were consuming vegetarian diet (90%) and 10% patients were consumed mix diet.

**Habit:**

Maximum patients were addicted to Tea (81.66%). 16.66 patients were addicted to Tobacco and 1.66% patients were addicted to alcohol.

**Vyayam:**

Majority of the patients were not doing Vyayama (66.33%) followed by irregular (18.33%). 5% patients were doing excessive vyayam and 3% patients were doing proper vyayama (Graph9).

**Agni:**

Maximum of the patients i.e. (51.66%) were reported to have Vishamagni. Tikshanagni was noted in (26.66%) of the patients. Followed by Mandagni (21.66%).

**Appetite:**

Maximum of the patients i.e. (60%) were reported to have normal appetite Irregular appetite was noted in (53.33%) of the patients.

**Koshtha:**

Maximum of the patients i.e. (46.66%) were reported to have mrukoshth. Madhyam was noted in (35%) of the patients. Followed by krurkoshth(18.33%).

**Bowel habit wise Distribution:**

Maximum of the patients i.e. (28.33%) were reported to have Irregular bowel habit. Regular bowel habit was noted in (28.33%) of the patients

**Anxiety:**

Maximum of the patients i.e. 38(63.33%) were reported to have no anxiety. 26(46.33%) of the patients were noted to have anxiety.

**Hetu:**

Maximum of the patients i.e. 44(73.33%) were reported to have Atirukshakatu, amlalavan ahar. Ativyam, Krodh, Chinta was noted in 9(15%) patients. Followed by Vegvidharn, Ratrijagran in 7(11.66%)

**Sharir prakruti:**

Vatpittaj prakruti dominance 25(41.66%) was observed. Followed by Pittakaphaj17 (28.33%) vatakaphaj was seen in 8 (13.33%) and 8 (13.33%) patients were observed pittavataj prakruti and kaphapittaj prakruti was seen 3 (5%).

**Manasprakruti:**

Maximum of the patients i.e 50 (83.33%) were reported to have Rajas prakruti. Tamas was noted in 6(20%) of the patients. Followed by Satva 4 (6.66%).

**Nakha, Netra, Twaka Panduta:**

In Group A 17(56.66%) patients shown marked improvement in Nakh-Netra-Twak panduta, while 13 (43.33%) patients shown moderate improvement. In Group B 1(3.33%) patient Shown marked improvement 27(90%) shown moderate improvement and 2(6.66%) shown mild improvement.

**Shirashool:**

In Group A all patients 30(100%) shown marked improvement, patients have in Group B only 9(30%) patients Shown marked improvement 20(66.66%) have shown moderate improvement and 1(3.33%) shown no improvement.

**Angamarda:**

In Group A 25(83.33%) patients shown marked improvement, while 5 (16.66%) patients have shown moderate improvement. In Group B 7(23.33%) patients shown marked improvement and 16 (53.33%) shown moderate improvement and 7(23.33%) shown mild improvement.

**Durbalata:**

In Group A, 27(90%) patients shown marked improvement in durbalata, while 3(10%) patients shown moderate improvement. In

Group B 15(50%) patients shown marked improvement 13(43.33%) shown moderate improvement and 2(6.66%) shown no improvement.

**Bhrama:**

In Group A, all patients 30(100%) have Shown marked improvement in Bhram In Group B 17(56.66%) patients have Shown marked improvement 13(43.33%) have shown moderate improvement

**Anannabhilasha:**

In Group A, 28 (93.33%) patients shown marked improvement in Anannabhilasha, while 2 (6.66%) patients shown moderate improvement. In Group B, 5(16.66%) patients shown marked improvement. 17(56.66%) shown moderate improvement and 5(16.66%) shown mild improvement and 3(10%) shown no improvement.

**Shwas:**

In Group A 29(96.66%) patients Shown marked improvement in Shwas, while 1(3.33%) patient shown moderate improvement. In Group B patients 20(66.66%) patients Shown marked improvement 10(33.33) shown moderate improvement.

**Hrudayspandan:**

In Group A all patients 30(100%) Sown marked improvement in Hridayspandan. In Group B, 29 (96.66%) patients shown marked improvement and 1(3.33%) have shown moderate improvement.

**HB %:** In Group A 6(20%) patients Shown marked improvement in HB%, while 16 (53.33%) patients shown moderate improvement. In Group B only 1(3.33%) patient Shown marked improvement 8 (26.66%) shown moderate improvement and 21 (70%) shown mild improvement.

**PCV:** In Group A, 14(46.66%) patients have Shown marked improvement in pcv, while 13 (43.33%) patients shown moderate improvement. In Group B 7 (23.33%) patients Shown marked improvement, 22(73.33%) shown moderate improvement.

**CONCLUSION****1) Nakh-Netra-Twak panduta**

In clinical study Drug A i.e. Mandoor vatak is more effective in reducing Nakh-Netra-Twak panduta as compared to drug 'B' i.e Ferrous sulphate 200mg as (t=11.19>1.67).

**2) Shirshool**

Drug A i.e. Mandoor vatak is more effective in reducing shirshool as compared to drug 'B' i.e Ferrous sulphate 200mg as (t =3.31>1.67).

**3) Angamard**

Drug A i.e. Mandoor vatak is equal effective in reducing angamard with respect to drug 'B' i.e Ferrous sulphate 200mg as (t =0.17< 1.67).

**4) Durbalata**

Drug A i.e. Mandoor vatak is equal effective in reducing durbalata with respect to drug 'B' i.e Ferrous sulphate 200mg as (t =0.1748< 1.67).

**5) Bhram**

Drug A i.e. Mandoor vatak is equal effective in reducing bhram with respect to drug 'B' i.e Ferrous sulphate 200mg as (t=0.9252<1.67).

**5) Ananabhilasha :** Drug A i.e. Mandoor vatak is more effective in reducing 'annanabhilasha as compared to drug 'B' i.e. e Ferrous sulphate 200mg as (t=1.97>1.67)

**6) Shwas**

Drug A i.e. Mandoor vatak is equal effective in reducing shwas with respect to drug 'B' i.e Ferrous sulphate 200mg as (t= 1.2<1.67).

**7) Hridayspandan**

Drug A i.e. Mandoor vatak is equal effective in reducing hridayspandan with respect to drug 'B' i.e Ferrous sulphate 200mg as (t =0.67<1.67)

**8) Hb%**

Drug A i.e. Mandoor vatak is more effective in reducing 'Hb%' as compared to drug 'B' i.e. e Ferrous sulphate 200mg as (t=3.41>1.67)

**9) PCV**

Drug A i.e. Mandoor vatak is equal effective in reducing PCV with respect to drug 'B' i.e Ferrous sulphate 200mg as ( $t=1.14 < 1.67$ ).

From study it is concluded that Mandoor Vatak did not create any kind of side effects. so it can be used as an ideal formulation of Pandu.

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