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Comparative study on efficacy of *Murvadya Churna* with *Lauha Bhasma* and *Navayas Churna* in *Pandu Roga* (IDA)

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Abstract:

Swastha is described as the balance state of *Prasanna Atma, Mana,* and *Indriyas* along with *Dosha, Dhatu, Agni, and Mala. Dhatu Vaishamyata* is the cause of all sickness. One of them, called *Pandu Roga,* is brought on by *Dhatu Vaishamyata*. The primary characteristic of *Pandu Roga* is *Pandutva,* as the name suggests. It is one of the *Rasavaha-Srotodushti,* claims Charaka. It is referred to *as Raktavaha-Srotodushti* by Susruta. Iron Deficiency Anemia, which manifests with major symptoms such a sense of weakness, exhaustion, shortness of breath, palpitations, Koilonychia, Glossitis, Dysphagia, and impaired taste perception, is caused by inadequate nutritional intake and incorrect iron absorption. **Aim**:- Comparative study on the efficacy of *Murvadya Churna* with *Lauha Bhasma* and *Navayas Churna* in *Pandu Roga* (IDA). **Material and Methods**:-60 patients (30 in each group) of *Pandu Roga* were selected randomly. Group A treated with *Murvadya Churna with Lauha Bhasma* while Group B was treated with *Navayas Churna* twice in a day. The study duration was 30 days. **Results:**- Both groups showed significant improvement in subjective and objective parameters While the trial groups showed better improvement**. Conclusion**:- The efficiency and security of *Murvadya Churna with Lauha Bhasma and Navayas Churna* were amply supported by the study.

Keywords:-

Lauha Bhasma, Murvadya Churna, Navayas Churna, Pandu Roga(IDA)

Introduction

Sharir, *Indriya*, *Satva*, and *Atma* are rationally combined in Ayu. *Dosha*, *Dhatu*, and *Mala* make up *Sharira*. These elements combine to form the body's structural and functional unit. They are intimately related in such a way, that depletion of one result in disasters effect on the other. So, the Ayurveda focuses on the factors like maintaining good health and eradicating the disease in the sick through a holistic approach, lifestyle routines, dietary habits, and safer treatments. Malnutrition, whether owing to insufficient nutritional intake or a lack of a well-balanced diet and the world's population explosion has resulted in the emergence of different diseases, *Pandu Roga* (IDA) being one of them. According to Ayurveda, the body is made up of seven *Dhatus*, which are accountable for the being's survival. Foremost *Dhatu* is *Rasa*, the most important of them all.

Pandu Roga (IDA) is a *Rasa pradoshaja Vyadhi*, a Pitta dominating *Tridoshaja* ailment, according to Charaka.[i] Sushruta, on the other hand, called it *Raktapradoshaja Vyadhi*. [ii] *Pandu Roga* (IDA) is mentioned in *Bruhattrayi and Laghutrayi.* In Charak Samhita *Pandu Roga* (IDA) has been described after *Grahani chikitsa*, as *Grahani* is one of the causes of *Pandu*. According to Acharya Charaka, *Mandagni* is the main cause of *Pandu Roga*[iii]

Pandu Roga (IDA) is disease in which the body's lustre is diminished and the colour of skin becomes pale, which our ancient classics explain as *Vaivarna*, *Keteki Dhuli Sannibha*[iv], and so on. The key diagnostic sign of *Pandu Roga* (IDA) is *Pandura Varna*(pallor), which is a change of colour in the body. *Panduta*, or skin pallor, is caused by the vitiation of *Rakta Dhatu* in the body. [v]

It is a sickness in which *Alpa Rakta* causes *Panduta* (pallor/ yellowish-whitish) *Vivarnata* of *Twaka* (skin discoloration) (reduced blood)[vi] *Agnimandya* (lack of appetite), *Aruchi* (tastelessness in food), *Daurbalya* (general weakness), *Bhrama* (giddiness) are some of the other symptoms of *Pandu Roga* (IDA).[vii] Because to *Panduta* or pallor over the body, *Pandu Roga* (IDA) is most closely related to Iron Deficiency Anemia.

Due to resemblance of symptoms, it can be correlated with Iron Deficiency Anemia of modern science. [viii]Anemia is a condition in which there is reduction in the number of RBCs per cumm of the blood and decreased concentration of Hb% in RBCs. Reduction in Hb% decreases the oxygen carrying capacity of the blood to all the tissues, resulting in paleness and other symptoms. Commonly, it results from a dietary of iron. Anemia causes a weakened immune system, decreased work capacity, decreased cognitive abilities, and reduced overall quality of life.

Nutritional Deficiency, Anemia, Megaloblastic, Haemorrhagic, Haemolytic, Aplastic, Sickle cell Anemia, and Thalassemia are all terms used in modern medicine to describe distinct kinds of anemia. Iron Deficiency is one of them. Iron Deficiency Anemia is the most common nutritional deficiency disorder in the world, with a higher prevalence in poorer nations like India. It can affect anyone at any age, but it is more common in women of reproductive age, pregnant women, and children.[ix]

Anemia is a condition in which there is a deficiency of haemoglobin in the blood due to a lack of RBCs or haemoglobin in the cells.[x] Anemia is a serious global public health problem that affects young children and women disproportionately. Deficiency in iron the most prevalent and pervasive nutritional condition on the world is Anemia. Every second pregnant woman and over 40% of preschool children in underdeveloped nations are expected to be Anemic. On average, IDA is thought to be the cause of 50% of Anemia worldwide. IDA is ranked without of 26 risk factors globally. IDA is considered one of the most common types of malnutrition[xi].

According to the World Health Organization (WHO), there are two billion people with Anemia in the world, and half of the Anemia is due to iron deficiency. The estimated prevalence of Anemia in developing countries is 42% in women of age 15-59 years, and 30% in men of the age group 15-59 year. [xii] [xiii] According to the National Family Health Survey, just 22.7 percent of men in this age group were anemic.

Because Ayurvedic Herbo-mineral iron preparations are free of risks, they must be studied to determine their efficacy in the treatment of *Pandu Roga* (IDA). Different iron formulations have been utilized for the treatment *of Pandu Roga* (IDA) since ancient times. One of these Ayurvedic remedies is *Murvadya Churna*.[xiv]

Murvadya Churna works by affecting *Srotasas* (micro channels) and *Agni* (digestive fire), according to the components (digestive fire mechanism).[xv] There are no research on the effectiveness of in the literature, *Murvadya Churna* with *Lauha Bhasma* is used to treat *Pandu Roga* (IDA). As a result, we created a strategy to test the efficiency of *Murvadya Churna* in conjunction *with Lauha Bhasma* & *Navayas Churna* in the treatment of *Pandu Roga* (Iron Deficiency Anemia).

Need of Study

- Iron Deficiency Anemia is a chronic condition many times the reason for a person's undiagnosed ill health. It majorly affects a person's working capacities, even daily routine activities. Women are more prone to Iron Deficiency Anemia because of deficient intake of iron, heavy blood loss during menstruation & parasitic infection, etc. There is a need for safe, effective treatment options which should be devoid of adverse effects.[xvi]
- There is a lack of studies relating *Murvadya Churna* with *Lauha Bhasma* as a treatment option for anemia, so this study is planned to assess the usefulness of *Murvadya Churna* with *Lauha Bhasma in* the treatment of *Pandu Roga* (Iron Deficiency Anemia).

Aim And Objectives

Aim: -

Efficacy of *Murvadya Churna with Lauha Bhasma* in the management of *Pandu Roga*
(Iron Deficiency Anemia).

Objectives:

1. To evaluate the effect of *Murvadya Churna* with *Lauha Bhasma* on *Panduta, Agnimandya, Aruchi, Daurbalya,* and Hb%, MCV, MCH MCHC.
2. To evaluate the effect of *Navayas Churna* on *Panduta, Agnimandya,*

Aruchi, *Daurbalya* and Hb%, MCV, MCH, MCHC.

3. To compare the effect of *Murvadya Churna with Lauha Bhasma* & *Navavyas Churna on Panduta*, *Agnimandya*, *Aruchi*, *Daurbalya* and Hb%, MCV, MCH, MCHC in *Pandu Roga* (Iron Deficiency Anemia)

Material and Methods: -

Source of Data: Total 60 patients, divided into Group A and Group B(30 patients in each group) were reported to OPD and IPD of Kayachikitsa department, MGACH & RC.

Study Design: Randomised Standard controlled Single Arm Study

Study type: Interventional Clinical Study.

Inclusion criteria

- Patients between the age group 18-45 years of females.
- Patients having Hb% in the range of 7 to 11 gm/dl
- Patients having the symptoms of *Pandu Roga* like *Agnimandya*, *Daurbalya*, *Panduta*, *Aruchi*

Exclusion criteria: -

- Known case of Thalassemia, Sideroblastic anaemia, Anaemia due to Malignancies, Congenital absence of Iron Binding Protein, Hereditary sickle cell, Aplastic, Haemolytic anaemia, Leukaemia.
- Pregnant & lactating women
- K/C/O abnormal/ dysfunctional uterine bleeding
- Females having menopause

Intervention

Group A- Treated internally with *Murvadya Churna with Lauha Bhasma*

Group B- Treated internally with *Navayas Churna*

Posology

Group A – *Murvadya Churna with Lauha Bhasma* 500mg two times a day with warm water after meal

Group B – *Navayas Churna* 500mg two times a day with honey after meal

Composition of material:

Table No. 1 Showing the ingredients of *Murvadya Churna with Lauha Bhasma*

Sr. No.	Ingredients	Botanical Name	Part Used	Quantity	Collection from
1	*Murva*	*Marsdenia tenacissima*	Stem	1 part	Authentic shop
2	*Chitrak*	*Plumbago zeylanic*	Root bark	1 part	Rasashala, MGACH &RC
3	*Bala*	*Sida cardifolia*	Stem, Seed	1 part	Rasashala, MGACH &RC

Sr No.	Ingredient	Botanical Name	Part Used	Quantity	Collected from
1	*Lauha Bhasma*	Iron	Powder	3 parts	Rasashala, MGACH &RC

Preperation of material

- All the authentic raw drugs were collected
- Each drug taken 150 mg in quantity
- After that with the help of grinder made the fine powder of each drug separately
- Add all the drugs and *Lauha Bhasma* (450gm) in the container
- Mix all the powdered drugs with the help of long spatula
- Finally transfer the medicine into bottles with spoon in appropriate quantity**.**

Assessment criteria

- **Assessment criteria**

Subjective assessment: - (on 0th day, 15th day, 30th day)

a. *Panduta* (pallor of *Twaka, Nakha, Netravartma, Karnapali, Jiwha, Hastapadatala)*
b. *Agnimandya* (diminuation of *Agni*)
c. *Aruchi* (tastelessness in food)
d. *Daurbalya* (generalised weakness)

Objective criteria: - (on 0th day & on 30th day)

The following assessment were done before & after the treatment

a. Hb%
b. MCV
c. MCH
d. MCHC

Gradation of assessment criteria

Statistical analysis

The information was analysed. Statistically, the Chi-square test, Student's paired test, and unpaired t-test, Wilcoxson's Signed Rank test were used to apply descriptive and inferential statistics. The study was conducted using SPSS 24.0 & Graph Pad Prism 7.0 software, with a significance level of $p<0.05$

Observation & Results: -

In this study patients between age group 18 -45 yrs females were included. Maximum patients that are 39 (65%) from 18 – 30yrs age group and 21 (35%) from 30 -45yrs age group. Occupation wise distribution of patients showed that 13(21.66%) patients were housewives, 12(20%) patients were in service and 35(58.33%) were students. So, from these results it is evident that most of the women are from middle age group and more students are prone to Anaemia.

Distribution of patients according to diet, it was observed that, 42(70%) patients were vegetarian and 18(30%) patients were mixed (veg & non-vegetarian) dietary habit was present. In this study 42(70%) were of *Mandagni*, 11(18.33%) were patients had *Tikshnagni* and 7(11.66%) patients had *Vishmagni*. It shows that more vegetarian is prone as well as *Mandagni* is major responsible factor for the *Pandu Roga.*

In this case study out of 60 patients in 7(11.66%) patients had no any addiction, 5(8.33%) having addicted to coffee, maximum that is 42(70%) had addiction of tea, 4(6.66) patient had taking Supari and 2(3.33%) had addiction of Tobacco. In this study, patients 12(20%) patients belonged to low socio-economic status,

48(80%) patients belonged to middle socio-economic status. So, it can conclude that tea addiction women as well as lowe and also middle socio-economic group more vulnerable to *Pandu Roga* (IDA).

Prakruti wise distribution showed that 1(1.66%) had *Kapha- Pittaja Prakruti*, 14(23.33%) had *Pitta- Kaphaja*, 20(33.33%) had *Pitta- Vataja* and 25(41.66%) had *Vata- Pittaja*. *Pitta Tara Prakruti* person are more prone to *Pandu Roga*(IDA), as *Pitta Dosha* is major responsible *Dosha* to cause *Samprapti of Pandu Roga*.

Statistically, significant improvement was observed in both groups in the reduction of blood parameters (Hb%, MCV, MCH, MCHC) after the treatment. Comparison of both groups was statistically not significant after treatment that is both groups are equally efficient in increasing Hb%. Regarding the comparison of overall improvement in both groups, it was observed that in both groups most of the patients showed Excellent (33.33%), to Moderate (66.67%) improvement.

Table No.2 Showing Comparison of *Pandutva* in both group at 0th, 15th and 30th day

	Day 0	**Day 15**	**Day 30**
Group A	1.80±0.66	1.16±0.53	0.53±0.50
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	6.23	10.03
p-value	-	0.0001, S	0.0001, S
Group B	1.70±0.65	1.13±0.43	0.60±0.49
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	6.15	7.94
p-value	-	0.0001, S	0.0001, S
Comparison between two groups (Mann Whitney U Test)			
z-value	0.59	0.32	0.51
p-value	0.55, NS	0.74, NS	0.60, NS

Table No. 3 Comparison of *Agnimandya* in between both Groups on 0th, 15th,30th day

	Day	**Day 15**	**Day 30**
Group A	1.36±0.55	0.96±0.49	0.50±0.50
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	4.39	7.54
p-value	-	0.0001, S	0.0001, S
Group B	1.93±0.69	1.13±0.50	0.60±0.49
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	7.95	8.65
p-value	-	0.0001, S	0.0001, S
Comparison between two groups (Mann Whitney U Test)			
z-value	3.24	1.28	0.77
p-value	0.001, S	0.19, NS	0.44, NS

Table no.4 Showing Comparison in between groups in *Aruchi* on the 0th, 15th, 30th day

	Day 0	Day 15	Day 30
Group A	1.36±0.49	0.93±0.63	0.46±0.50
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	4.70	6.92
p-value	-	0.0001, **S**	0.0001**, S**
Group B	1.43±0.56	1±0.58	0.60±0.49
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	4.17	6.53
p-value	-	0.0001, S	0.0001, S
Comparison between two groups(Mann Whitney U Test)			
z-value	0.60	0.43	1.02
p-value	0.54, NS	0.66, NS	0.30, NS

	Day 0	Day 15	Day 30
Group A	1.60±0.67	1.10±0.48	0.60±0.49
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	4.70	6.92
p-value	-	0.0001, S	0.0001, S
Group B	1.90±0.60	1.20±0.48	0.73±0.44
Comparison with day 0(Wilcoxon Signed Rank Test)			
z-value	-	7.16	9.86
p-value	-	0.0001, S	0.0001, S
Comparison between two groups(Mann Whitney U Test)			
z-value	1.89	0.79	1.08
p-value	0.05, NS	0.42, NS	0.27, NS

Table No. 5 Showing comparison of Hb% in both the groups on 0th ,15th and 30th day

	Before t/t	After t/t	Student's Paired t test(t-value)
Group A	9.97±0.91	11.54±1.10	17.19, p=0.0001, S
Group B	10.07±0.55	11.30±0.71	11.69, p=0.0001, S
Comparison between two groups (Student's Unpaired t test)			
t-value	0.51	0.98	**Student's unpaired t test**

Table no. 6 Showing Comparison of MCV before and after treatment in two groups

	Before t/t	**After t/t**	**Student's Paired t test(t-value)**
Group A	72.23±5.23	78.55±5.23	7.11, p=0.0001, S
Group B	72.55±2.46	76.84±2.72	11.32, p=0.0001, S
Comparison between two groups (Student's Unpaired t test)			
t-value	0.30	1.59	**Student's unpaired t test**
p-value	0.76, NS	0.11, NS	

Table No.13 Showing comparison in both the groups before and after treatment of MCH

	Before t/t	**After t/t**	**Student's Paired t test(t-value)**
Group A	22.86±2.51	27.75±3.25	10.33, p=0.0001, S
Group B	23.25±1.71	28.48±2.46	11.04, p=0.0001, S
Comparison between two groups (Student's Unpaired t test)			
t-value	0.70	0.97	**Student's unpaired t test**
p-value	0.48, NS	0.33, NS	

Table No.7 Showing comparison in the both groups before & after treatment of MCHC

	Before t/t	**After t/t**	**Student's Paired t test(t-value)**
Group A	28.10±3.86	33.01±4.25	10.31, p=0.0001, S
Group B	28.42±4.22	33.02±3.45	7.98, p=0.0001, S
Comparison between two groups (Student's Unpaired t test)			
t-value	0.30	0.01	**Student's unpaired t test**
p-value	0.76, NS	0.99, NS	

Table No.8: Percentage of relief after treatment in total patients

Relief criteria	**No. of patients**	**Percentage of patients**
Excellent (>70%)	23	38.33
Moderate (30%-70%)	34	56.67
Poor (<30%)	3	5
Total	60	100

Results: -

Both groups of people showed a significant improvement in a number of clinical dimensions between before and post treatment.

Effect on *Panduta*:- *Panduta* (pallor) decreased by 35% in Group A and 33% in Group B. Both the findings were statistically significant.

Effect on *Agnimandya*:- *Agni* became normal the improvement in Group A was 29% while in Group B was 41%.And also both groups were showed significant results.

Effect on *Aruchi*:- Due to *Agnimandya* and *Agni* hampered there causes *Aruchi* that means tastelessness in food so it was decreased by 31% and in Group B was 30%.

Effect on *Daurbalya*:- It was reduced to 31.2% in Group A and 36.8% in Group B, so the patient feels more fresh and somewhat energetic.

Effect on Hb%: - It was increased by 36% in Group A and also 22% in Group B so, results are significant of both the groups

Effect on MCV: - These are blood parameters and was increased by 8% and 6% in Group A and Group B respectively which are also having the significant improvement.

Effect on MCH and MCHC: - MCH increased by 21% and 22.4% in Group A and Group B respectively, also 17.4 % and 16.1 % in both A and B groups respectively. Both showed significant improvement.

Discussion: -

This disease because of the predominance of *Panduta* or pallor across the body, the closest association *Pandu roga* is with Iron Deficiency Anaemia. Iron deficiency is a highly frequent nutritional condition that affects about one-third of the world's population. Anaemia due to iron deficiency is extremely common.[xvii].

In *Grahani Dosha Chikitsa Adhyaya* is how Acharya Charaka explained: "*Agni Vichara*" and its significance. As a result, he claims that insufficient *Ahara* (i.e., *Anashana, Ahara poshana, Abhava*) has been a major cause of *Agnimandya* for a long time. Because this *Agnimandya Addya Dhatu, or Rasa dhatu*, does not create good or in adequate quantity, this *Asara Rasadhatu* is unable to make the *Uttarottar Sara Dhatus*, and therefore it is also accountable for the *Dhatukshaya*.. . All three doshas are involved in the development of the disease in *Pandu Roga*: *Vata*, pitta, and *Kapha*. However, "*Pitta Dosha*" is one of the three doshas that plays a significant role in *Pandu Roga's samprapti.* [xviii].

In current study clinical and it includes 60 patients of *Pandu Roga* were selected and classified in two equal groups. Randomly selected both groups treated as Group A treated with *Murvadya Churna* with *Lauha Bhasma* 500mg after meal with warm water and In Group B *Navayas Churna* 500mg after the meal with honey for 30 days.

In the present study, only female patients were enrolled. Women majorly could be caused by a lack of a balanced diet, ignorance towards the food, regular blood loss during menstruation, miscarriage, and increased demand during pregnancy and nursing.[xix]

Most of the studies previously conducted showed that more incidence of

Anemia is more in the reproductive age group because this could be related to an increase in nutrients as individuals age. Also, the younger generation is more prone to poor dietary habits and lifestyle routines. [xx] [xxi] This research study, includes both vegetarian & mixed (vegetarian & non-vegetarian) food habit of patients it shows majority anaemic patients are vegetarian that was 70% & 30% having mixed diet. Vegetarians are more likely to be deficient in certain nutrients, such as vitamin B12 and iron. Vitamin B12 deficiency is caused by a lack of this nutrient among vegetarians, whereas iron deficiency is caused by both inadequate iron consumption and limited absorption of iron from plant sources. [xxii] [xxiii] [xxiv]

As the trial drug is Herbo-mineral preperation having *Raktashodhak* (blood purifier), *Rakta-vardhaka* (increases blood cells) property also it contains high iron content and improves skin complexion, immunity, and stamina. As it is haematinic it corrects the *Pandutva* (pallor). It is also *Vrushya* (aphrodisiac) and helps in skin disorders. In the *Pandu Roga* due to *Agni vikruti Rasavaha strotas* gets vitiated and causes *Agnimandya*. So, to corrects these trial drug having the properties like *Deepana, Pachana, Rasayana, Anulomana, Dhatwagnivardhaka, Tridoshaghna, Ruchikara, Agnivardhaka*. It helps to improve metabolism of the body as well as helps for *Agnivardhana*. Also, all these factors increase absorption of nutrients and, improves strength as well as digestive power by digest food properly. It also having the properties like *Brimhana, Balyakara, Vrushya, Anulomaka, Agnivruddhikara* so it helps to improve the absorption of nutrients from the food and also due to *Agnivardhana* property it gives *Bala* (strength) as well as it improves stamina, vigour and vitality. In this study it also having hematinic in nature and also improves digestion so that metabolism increases further it leads to absorption of various nutrients in the body and further it helps to increase in all the parameters of CBC like Hb%, MCV, MCH and MCHC

Probable Mode of action of *Murvadya churna* with *Lauha Bhasma*

In this trial drug formulation contains *Murva* (*Marsdenia tenaccissima*), *Chitraka* (*Plumbago zeylanic*) and *Bala* (*Sida cardifolia*) and all three drugs are in equal quantity and added *Lauha Bhasma* (Iron) in three parts in it. It is the Herbo-mineral preparation having a predominance effect on *Pandu Roga* in all the Subjective as well as objective criteria.

Murva is having *Tikta, Kashaya rasa, Guru, Ruksha guna* and having *Ushna Virya and Katu Vipaka*. It is *Tridoshghna* in properties. According to Gadanigraha (*madhyamakhanda*), *Murva* is *Raktashodhaka* in property that means helps to treating the impurities of blood, skin diseases, *Pandu, Kamala, Jwara, Medoroga, Prameha, Arsha, Bhagandhara*, it acts as *Krumihara* in nature which helps to cure *Agnimandya and Aruchi*. As it is good appetizer and anti-oxidant property that increases metabolism and improves the absorption of iron from *Lauha Bhasma*. Also, *Murva* has antibacterial, anti-inflammatory, anti-fungal, anti-toxin, anti-helminthic, anti-cancerous, laxative

properties. It is helpful in all types of bleeding disorders. .[xxv xxvi xxvii]

Chitraka (*Plumbago zeylanic*) having *Katu Rasa Laghu, Ruksha, Tikshna Guna, Ushna Virya, Katu Vipaka*. It acts as *Vatakaphahara, Deepana, Pachana, Grahi*. So, it corrects *Agnimandya* and improves digestion, it has *Lekhana* property (excise unhealthy tissue), anti-inflammatory, *Rasayana*(rejuvenator) properties. It helps in functional improvement of hepatocytes may be by an accelerated regeneration of Parenchymal cells and early improvement in secretory mechanism of the hepatic cells. .[xxviii xxix]

Bala (*Sida cardifolia*) is *Madhura in Rasa, Laghu, Snigdha, Pichila Guna, Sheeta Virya* and *Madhura Vipaka* in nature. It has *Doshghnata* as *Vata-Pittahara, Balya, Rasayana, Vrushya, Brimhana in Karma*. [xxx] Charaka described *Bala* under *Balya*, *Brumhani dashaimani* "*Bala*" itself denotes the "strength" in English. [xxxi] It widely used in CNS depressant, analgesic, anti-inflammatory, numerous *Vata* disorders, purifies the blood, improves strength and helps in development. It has immense amounts of anti-oxidants and other vital nutrients and helps to repair, restore the skin health. [xxxii] So, in *Pandu Roga* there is *Bala, Varna* and *Ojokshaya* is there so *Bala* helps to improve the strength.

Lauha Bhasma (Iron) is *Nirasa* having *Laghu, Slakshna Guna* and *Ushna Virya*. It possesses *Tridoshghna* property. contains highly absorbable elemental iron micro-fine particles, therefore it is main component to treat Iron Deficiency Anaemia. [xxxiii] It is also useful in skin disorders, liver & spleen disorders, dyspepsia, worm infestation, cardiac disorders, provides vigour. It has anti-spasmodic, anti-aging. It also known to strength body. Overall, it is immunomodulatory in action. It contains Calcined iron so it increases haemoglobin level and aids in blood coagulation. It helps in igniting the digestive fire and enhances lost appetite. Its strength the body and improves the production of RBCs, so helps in bleeding disorders. [xxxiv]

Conclusion: -

From this study it is concluded that *Murvadya Churna* with *Lauha Bhasma* and *Navayas Churna* is effective in alleviating *Panduta* (pallor), *Agnimandya* (diminuation of *Agni*), *Aruchi* (tastelessness), *Daurbalya* (generalised weakness). This drug therapy was beneficial in improving blood parameters like Hb%, MCV, MCH, MCHC. Both the groups were showed significant improvement but trial drug preparation have shown better results. So, it can be inferred that *Murvadya Churna with Lauha Bhasma* is more effective than *Navayas Churna* in relieving subjective (*Panduta, Agnimandya, Aruchi, Daurbalya*) as well as objective parameters (Hb%, MCV, MCH, MCHC).

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