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Randomised Open Controlled Clinical Trial to Evaluate The Efficacy of Murvadya Churna in Pandu.

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ABSTRACT

Ayurveda described Pandu vyadhi as Pitta Pradhana vyadhi associated with Rasa and Rakta dhatu[1]. Pandu vyadhi is characterized by the paleness of the body, the colour of skin become pale which is explained as vaivarna. In ayurved samhitas Pandu vyadhi is mentioned under different clinical manifestation which occurs due to Rasavaha strotas dushti by charak, characterized by Panduta, Daurbalya, Aruchi, Shwas etc. whereas acharya Sushruta stated that it is caused due to Raktavaha strotas dushti

Samprapti Ghataka –

- Dosha - Pittapradhana Tridosha
- Dushya - Rasa, Rakta, Mamsa, Meda, Asthi, Majja and Oja
- Strotasa - Rasavaha and Raktavaha mainly
- Udbhavasthana - Aamashaya, Hridaya
- Sanchara Sthana - Whole body through Dasha Dhamani
- Adhishthana - Twak and Mamsa
- Vyakti Sthana - Twak, Netra, Nakha
- Rogamarga - Bahya Rogmarga

Keywords: *Pandu , Pittapradhana Tridosha ,Murvadya Churn ,Deepan ,Pachana.*

INTRODUCTION

Ayurveda, the traditional Indian system of medicine, lays down a wide range of principles for maintaining health and treating disease. Its foundational philosophy is centered on the dictum "Prevention is better than cure", which has been emphasized since ancient times[1]. Ayurveda advocates the maintenance of balanced lifestyle habits, wholesome diet, proper daily and seasonal regimens, and timely intervention to prevent disease progression.

In the present era, however, rapidly changing lifestyles, increased mental stress, irregular dietary habits, and negligence toward nutrient-rich food have contributed to rising nutritional deficiencies. Particularly in populations belonging to lower socio-economic strata, factors such as poverty, illiteracy, and limited access to healthcare further predispose individuals to malnutrition—most notably iron deficiency, which commonly manifests as anaemia. Globally, iron deficiency anemia remains the most widespread nutritional disorder, affecting nearly one-third of the world's population. While developed nations report relatively low incidence, the prevalence in India is significantly higher[4].

AIM

The primary aim of the present clinical study is to evaluate the therapeutic efficacy of Murvadya Churna in the management of Pandu Roga.

- To assess and evaluate the clinical efficacy of Murvadya Churna administered in a dose of 2 g twice daily in patients diagnosed with Pandu Roga.
- Murvadya Churna administered in the stated dose and duration produces a **significant improvement** in individual clinical symptoms of Pandu such as Gauravam, Daurbalya, etc

DRUG REVIEW

- **A] MURVADYA CHURNA[1] –**
- मूर्वाबलान्वितं चूर्ण चित्रकस्योष्णवारिणा ।

पाण्डुरोगविनाशाय प्रातरुत्थाय संपिबेत् ।'……..(ग.नि. । पाण्डु.)

Preparation Of Drug :

1) Coarse Churnas of Murva (4 Parts), Bala (4 Parts), Chitrak (1 Part) each was taken in Khalva Yantra and fine powder (Churna) was prepared.

DRUG DETAILS[3,4] –

1] MURVA –

Latin name – Marsdenia Tenacissima

- **Family -** Asclepiadaceae
- **English Name –** Bush Banana
- **Sanskrit names –**Murva
- **Species -** Sansevieria roxburghiana Schult. & Schult. F.
- **Pharmacological properties :**
  - Rasa – Tikta, Kashaya
  - Guna - Guru
  - Virya - Ushna
  - Vipaka - Katu
- **Doshaghnata** - Tridoshaghna
- **Upayuktanga -** Plant
- **Chemical constituents** -alkaloids, flavonoids, tannins, saponins, carotenoids, rhizome contain palmitic acid, 6, 4, dihydroxy-3-propen chalcones, 4-propenoxy-7-hydroxy anthocyanidines, caftaric acid, isorahmnitin-3-O-β-D-glucopyranoside.
- **Pharmacological actions** -Antitumor, antibacterial, antidiabetic, antimicrobial properties whereas the roots have antibacterial, antifungal, antioxidant, analgesic, antibacterial and antimicrobial activity.

- **Rogaghanata –** Shwasa, Kasa, Kushtha.

2] CHITRAK –

- **Latin name –** Plumbago zeylanica
- **Family –** Plumbaginaceae
- **Sanskrit name –** Anala, Dahana, Pithi, Vanhisajnaka, Agni, Agnika, Jyothi, Nirdahana, Vanhi, Sikhi, Vyala.
- **English name –** Leadwort
- **Pharmacological properties :**

❖ Rasa - Katu

❖ Guna - ushna

❖ Virya - Ushna

❖ Vipaka - Katu

- **Doshaghnata -**Vatakaphaghna
- **Upayuktanga –** Mula
- **Pharmacological actions –** Antimicrobial, Anticonvulsant, Hepatoprotective
- **Rogaghanata –** Kushtha, Krumi, Kasa, Arsha, Vibandha.

3] BALA –

Latin name - Sida cordifolia

- **Family -** Malvaceae
- **Sanskrit names -**Vatyalika, Bala, Kharayashtika
- **Gana -** Balya, Brumhaniya, Prajasthapana, Madhuraskandha [Ch.], Vatasamshamana [Su.].

- **Pharmacological properties :**

- Rasa - Madhura
- Guna - Laghu, Snigdha, Picchila
- Virya - Sheeta
- Vipaka - Madhura

- **Doshaghnata** -Vatapittashamaka
- **Upayuktanga** - Moola, Beeja
- **Chemical constituents –** Eqhedri [;pene, Mucin, Phytosterole
- **Pharmacological actions** -Vedanasthapaka property.
- **Rogaghanata** - Vatavyadhi, Pittavikara, Netraroga, Ardita, Pakshghata, Raktapitta, Grahani, Pradara, Shukrameha.

TREATMENT DETAILS -

Total 100 cases was selected by Simple Random Technique from department of kayachikitsa from our rugnalaya, who was fulfil inclusive and exclusive criteria and registered with help of research performa prepared for study.

MATERIAL AND METHOD

Study Design:

The present study was designed as a Randomized Controlled Clinical Trial (RCT) to evaluate the efficacy of the intervention in patients diagnosed with *Pandu*.

Duration of Study:

The study was conducted over a period of 18 months, allowing sufficient time for follow-up and assessment of treatment outcomes.

Symptoms: Gradations and scoring was done as follows[1] –

Lakshan	No (0)	Mild (1)	Moderate (2)	Severe (3)
Panduta	Absent	Pallor ofTwak, netra	Pallor ofTwak Nakha,Netra, Jivha.	Pallor ofTwak, Nakh,Netra, Jivha, Hastapadtala
Daurbalya	Absent	Can do routinework with mild efforts.	Can do routinework with Moderate Efforts	Not able to do routine Work
Shwas	Absent	Shwas only after unusual heavy work.	Shwasondoing ordinary activities.	Shwaseven At rest
Shram-Bhramni- Pidita	NoBhram	Bhram on Walkingwith speed	Bhram on walking without speed	Bhramon Standing
Aruchi	Normal Instict of Taking food	Person dislike the test of the food	Person dislike the taste of the food and eats small quantity	Thoughthe personishugery, but due to aruchi,hefearto Takefood

Lakshan	Absent	Present
Gauravam		
Pindikodveshtan		
Shunakshikuta		

- **Overall assessment -**
- The obtained results was measured according to the grades given below ;

MarkedImprovement	75%&abovereliefofsignsandsymptoms
ModerateImprovement	>50%to<75%reliefinsignsandsymptoms
MildImprovement	>25% to <50% relief in signs and symptoms
Unchanged	<25%reliefinsigns and symptoms

Table no. 14 – Details of Study Drugs, Dosage, and Administration in Trial and Control Groups

	TRIAL GROUP
Drug Name	Murvadya Churna
Route Of Administration	Oral
Time of Administration	Twice a day
Dose	2 gm
Duration	90 days
Numbers of Patients	50
Kal	Vyane-udane
Anupan	Koshnajal

A. Effect of Murvadya Churna:

In this group, 50 patients of Pandu Vyadhi completed the full course of treatment and so the effect of murvadya churna therapy quoted from here onwards.

Statistical analysis of Panduta Showing Before Treatment and after treatment analysis for Panduta

Symptom	Panduta
Mean Score, B.T.	2.18
Mean Score, A.T.	0.78
S.D. (±), B.T.	0.66
S.D. (±), A.T.	0.71
S.E. (±), B.T.	0.09
S.E. (±), A.T.	0.10
W	0
Z	-5.77
P	0.0001
Result	Significant

Statistical analysis of Daurbalya Showing Before Treatment and after treatment analysis .

Symptom	Daurbalya
Mean Score, B.T.	2.12
Mean Score, A.T.	0.76
S.D. (±), B.T.	0.69
S.D. (±), A.T.	0.69
S.E. (±), B.T.	0.10
S.E. (±), A.T.	0.10
W	0
Z	-5.77
P	0.0001
Results	Significant

Statistical analysis of Shwas Showing Before Treatment and after treatment analysis .

Symptom	Shwas
Mean Score, B.T.	2.20
Mean Score, A.T.	0.76
S.D. (±), B.T.	0.76

S.D. (±), A.T.	0.59
S.E. (±), B.T.	0.11
S.E. (±), A.T.	0.08
W	0
Z	-6.06
P	0.0001
Results	Significant

Statistical analysis of Bhrama Showing Before Treatment and after treatment analysis .

Symptom	**Bhrama**
Mean Score, B.T.	2.22
Mean Score, A.T.	0.78
S.D. (±), B.T.	0.74
S.D. (±), A.T.	0.55
S.E. (±), B.T.	0.10
S.E. (±), A.T.	0.08
W	0
Z	-5.97
P	0.0001
Results	Significant

Showing Before Treatment and after treatment analysis for Aruchi

Symptom	**Aruchi**
Mean Score, B.T.	2.18
Mean Score, A.T.	0.78
S.D. (±), B.T.	0.72
S.D. (±), A.T.	0.65
S.E. (±), B.T.	0.10
S.E. (±), A.T.	0.09
W	0

Z	-5.83
P	0.0001
Result	Significant

Statistical analysis of Pindikodveshtanin Before Treatment and after treatment analysis .

Symptom	**Pindikodveshtan**
Mean Score, B.T.	1.98
Mean Score, A.T.	0.78
S.D. (±), B.T.	0.87
S.D. (±), A.T.	0.61
S.E. (±), B.T.	0.12
S.E. (±), A.T.	0.12
W	0
Z	-5.93
P	0.0001
Result	Significant

Statistical analysis of Shunakshikuta Before Treatment and after treatment analysis .

Symptom	**Shunakshikuta**
Mean Score, B.T.	1.90
Mean Score, A.T.	0.74
S.D. (±), B.T.	0.79
S.D. (±), A.T.	0.56
S.E. (±), B.T.	0.11
S.E. (±), A.T.	0.13
W	0
Z	-5.97
P	0.0001
Result	Significant

Statistical analysis of Hb% Before Treatment and after treatment analysis .

Objective criteria	**Hb%**
Mean Score, B.T.	9.14
Mean Score, A.T.	11.12
S.D. (±), B.T.	0.67
S.D. (±), A.T.	1.10
S.E. (±), B.T.	0.10
S.E. (±), A.T.	0.16
T	15.07
Df	49
P	0.0001
Result	Significant

Statistical analysis of MCH before Treatment and after treatment analysis.

Objective criteria	**MCH**
Mean Score, B.T.	26.33
Mean Score, A.T.	29.67
S.D. (±), B.T.	3.14
S.D. (±), A.T.	2.39
S.E. (±), B.T.	0.44
S.E. (±), A.T.	0.32
T	12.90
Df	49
P	0.0001
Result	Significant

Statistical analysis of MCV

Objective criteria	**MCV**
Mean Score, B.T.	78.45
Mean Score, A.T.	81.82

S.D. (±), B.T.	0.92
S.D. (±), A.T.	1.92
S.E. (±), B.T.	0.13
S.E. (±), A.T.	0.17
T	20.66
Df	49
P	0.0001
Result	Significant

Conclusion –

The effect of **Murvadya Churna (Group A)** is significant at p <0.05 for subjective criteria such as Panduta,Daurbalya,Shwas ,BhramaAruchi, Gauravam, Pindikodveshtan and Shunakshikuta

The effect of **Murvadya Churna (Group A)** is significant at p <0.05 for objective criteria such as Hb%, MCH, MCV

CONCLUSION

Pandu is a Tridoshaja Vyadhi, with Pitta Dosha being the primarily vitiated dosha responsible for the disease manifestation. Etiological factors include: Apatarpanjanya causes: excessive intake of katu, ruksha, laghu ahara, vegavidharana, and vishamashana. Santarpanjanya causes: Diwaswapna, vyayamavarjana, and consumption of madhura, guru ahara.In recent Era , consumption of fast food,junk food ,beverages. Psychological factors such as Chinta, Krodha, Bhaya, and Shoka play a significant role in aggravating Sadhaka Pitta, which contributes to the onset and progression of Pandu. Lifestyle and dietary habits, including sedentary routine, faulty dietary patterns, and irregular eating habits, lead to Pitta vitiation and subsequent manifestation of Pandu. The effect of Murvadya Churna on Pandu Vyadhi was statistically significant in improving subjective criteria (Panduta, Daurbalya, Shwas, Bhrama, Aruchi, Gauravam, Pindikodveshtan, Shunakshikuta) as well as objective hematological parameters (Hb%, MCH, MCV). Mode of action of Murvadya Churna includes pacification of Pitta Dosha, enhancement of Rakta Dhatu, Agnidipana (stimulation of digestive fire), and Amapachana (digestion of metabolic toxins).

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