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Evaluation of efficacy of A*vipattikar churna* versus *Chitrakadi kwath* in the management of A*mlapitta* (Hyperacidity) - A pilot study

Research Article

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Abstract

Amlapitta is a condition characterised by the predominance of *Pitta* and is associated with the *Annavaha* and *Purishvaha srotas*. It manifests as a result of imbalances in *Mandagni* (weakened digestive fire) and the presence of *Ama* (undigested or improperly metabolized substances). The prevalence rate of *Amlapitta* in India is 38.1%. Considering the similarities in etiopathogenesis, it can be correlated with Hyperacidity in Modern Science. Aim and Objectives: To evaluate the efficacy of *Avipattikar churna* versus C*hitrakadi kwath* in the management of *Amlapitta* (Hyperacidity). Methodology: An Interventional Study was conducted among 30 patients between the ages of 20 and 60 of either sex who had symptoms of *Tikta Amlodgar* (sour and bitter irructation), *Hrit-kanthadaha* (burning in heart and throat), *Udarashool* (epigastric pain) and *Utklesha* (nausea), and *Aruchi* (anorexia). Group A was given *Aipattikar Churna;* Group B was given *Chitrakadi Kwath*. Subjective Parameters were assessed in both groups on the 0th, 7th, and 15th days, and comparison was done by statistical analysis. Observation and Discussion: Both interventions proved effective, showcasing strengths in addressing distinct subjective parameters. Conclusion: Both drugs demonstrated high effectiveness in the study. Group A exhibited significant improvements across all subjective parameters, except *Udarshoola* (Abdominal pain). On the other hand, Group B displayed notable results in all subjective parameters, except for *Utklesha* and *Aruchi.* In conclusion, both groups were significant.

Keywords: *Amlapitta*, *Avipattikar churna*, *Chitrakadi Kwath*, Hyperacidity, *Mandagni, Tiktamloudgar*.

Introduction

Amlapitta is a condition primarily associated with *Pitta* imbalance, affecting the *Purishvaha Srotas* and *Annavaha srotas*. Its occurrence is linked to *Mandagni* (weakened digestive fire) and *Ama* (toxic metabolic byproducts). Madhukosa's definition of *Amlapitta* as *"Amlam vidagdham cha tat pittam amlapittam"* characterizes it by the vitiated state of *Pitta*, causing acidity and a burning sensation in ingested food. (1) Amlapitta denotes the vitiated condition of *Pitta,* and it imparts *Amlatvam* and *Vidagdathavam* to the ingested food. (2) Kasyapa Samhita is the pioneering text to dedicate a chapter, specifically Chapter 16 of *Khilasthana*, to *Amlapitta*. (3) Acharya Charaka has not explained *Amlapitta* as a separate entity, but the word is discussed in several places. Sushruta, in discussing a condition called *Amlika* related to excessive *Lavana* (salt) consumption, parallels *Amlapitta*. (4) Following Kashyapa, Madhava Nidana delves into *Amlapitta*, detailing its etiopathogenesis and symptomatology, presenting two clinical subtypes: *Urdhvaga* and *Adhoga Amlapitta*. (5)

The causal factors for *Amlapitta* involve *Aharaja Hetu* (dietary factors) (6) such as *Ati Tikshna* (very sharp intake), *Virruddhasana* (incompatible diet), *Katu Anna Pana* (pungent diet and drinks), *Ati Drava* (excessive liquid intake), *Ati Ruksha* (very coarse), *Gurubhojya* (heavy diet), *Abhisyandi, Atisnigdha* (unctuous), *Vidahi Anna, Vidahi Pana, Ati Usna* (very hot), *Ati Amla* (excessive acidic intake), *Ati Panam* (overdrink). *Viharaja Hetu* (habit factors) (7) contributing to *Amlapitta* include *Bhuktwa Diwasvapnat* (daytime sleep after meals), *Vega Dhararam* (suppression of natural urges), *Atisnat* (excessive baths), *Shayya Prajagarae* (improper sleeping schedule), and *Ati Avagahanat* (excessive swimming). *Manasika Hetu* (psychogenic factors) (8) play a significant role in health maintenance, with abnormal psychology impacting digestion physiology, potentially leading to *Amlapitta*.

Several studies correlate *Amlapitta* with modern diseases. Vidya Tripathi links it to GERD, Vaidya Purushttam to chronic hyperacidity, Vaidya S.N. Tripathi to non-ulcer dyspepsia, and Vaidya Harinath Jha to hyperacidity gastroesophageal reflux disease. This condition affects approximately 30% of the general population. (9) Pathophysiologically, reflux occurs when esophageal mucosa is exposed to gastro-duodenal components for an extended duration, leading to

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heartburn, regurgitation, water brash (salivation), and dysphagia. Management involves addressing causative factors, with medications like antacids, H2 receptor antagonists, proton pump inhibitors, prokinetics, anticholinergics, and surgery in advanced stages (anti-reflux surgery) being employed. (10)

Need of study

The escalating prevalence of the disease can be attributed to shifts in lifestyle, heightened stress levels, and diverse environmental factors. In the realm of modern science, a definitive cure remains elusive, and the treatments currently available are hindered by associated adverse effects. (11) Consequently, there arises a crucial demand for a safe and cost-effective herbal formulation that not only addresses the limitations of existing treatments but also provides a radical cure. *Chitrakadi kwath* is indicated in the management of Amplapitta in Yogratnakar having ingredients that possess *Deepana, Pachana, Vataanulomaka, and Pittashamaka* properties.

Aim and Objectives:

Aim:

Evaluation of efficacy of *Avipattikar churna* versus C*hitrakadi kwath* in the management of *Amlapitta* (Hyperacidity).

Objectives:

- To evaluate the efficacy of *Avipattikar churna* in subjective parameters of *Amlapitta* (Hyperacidity).
- To evaluate the efficacy of C*hitrakadi kwath* in subjective parameters of *Amlapitta* (Hyperacidity).
- To compare the efficacy of *Avipattikar churna* versus C*hitrakadi kwath* in the management of *Amlapitta* (Hyperacidity).

Materials and Methods

Place of work: Subjects for this study were meticulously chosen from the Kayachikitsa OPD and IPD of Mahatma Gandhi Ayurved College, Hospital & Research Centre, Salod (H), in addition to participants identified through Specialty Camps.

Case Definition: Patients between 20-60 years of age of either sex having symptoms of *Tikta Amlodgar* (sour and bitter irructation), *Hrit-kanthadaha* (burning in heart and throat), *Udarashool* (epigastric Pain) and *Utklesha* (nausea), *Aruchi* (anorexia) were selected in the Study.

Sample size: 30

Group A (Control Group N=15): Patients were given *Avipattikar Churna.*

Group B (Trial Group N=15): Patients were given *Chitrakadi Kwath.*

Study type: Pilot Study

Study Design: Interventional Study.

Sampling Techniques: Lottery method

Drug Material:

1. Chitrakadi Kwath(12)

Decoction prepared from the roots of *Chitraka (Plumbago zeylanica* Linnaeus*)*, *Eranda (Ricinus communis* L Webster), along with *Yava (Hordeum vulgare* Linnaeus) and Jawas (*Alhagi camelorum* Linnaeus), when ingested, exhibits therapeutic efficacy in alleviating symptoms of *Amlapitta* (Hyperacidity) by modulating the *Pitta dosha.*

Procurement Method: The raw material was procured from the market and the drug was identified & authenticated by the Department of *Dravayguna*.

Drug preparation technique: C*hitrakadi kwath* was prepared as per the standard operating procedure mentioned in *Sharangdhar* ***Samhita.***

Contents and Properties of *Chitrakadi Kwath:*(13)

Table 1: Showing Contents and Properties of *Chitrakadi Kwath*

Sr. no.	Name	Botanical name	*Rasa*	*Guna*	*Virya*	*Vipak*	*Doshaghnata/ Rogaghnata*
1	*Chitraka*	*Plumbago zeylanica* Linnaeus	*Katu*	*Laghu, Tiksha*	*Ushna*	*Katu*	*Kapha vata shamak*
2	*Eranda*	*Ricinus communis* L Webster	*Madhur, Katu, Kashaya*	*Snigdha, Tikshna*	*Ushna*	*Madhur*	*Tridoshaghna*
3	*Yava*	*Hordeum vulgare* Linnaeus	*Kashaya, Madhur*	*Guru, Mrudu*	*Sheeta*	*Katu*	*Kapha pitta shamak*
4	*Jawas*	*Alhagi camelorum* Linnaeus	*Madhur, Tikta*	*Guru, Snigdha, Picchila*	*Ushna*	*Katu*	*Vata pitta shamak*

Table 1 includes information such as the common and botanical names of the herbs, *Rasa* (their taste), *Guna* (qualities), *Virya* (potency), *Vipak* (post-digestive taste), and their impact on *Doshas* or *Doshaghnata/Rogaghnata* (diseases).

Table 2: Grouping and posology

Groups	No. of patients	Age	Intervention	Dose/ Anupana	Duration	Follow up
A - Study Group	15	20-60 years	*Avipattikar Churna*	5 g twice a day with *Ushnodak*	15 days	On 7th, 15th day
B - Control Group	15	20-60 years	*Chitrakadi Kwath*	40ml twice a day	15 days	On 7th, 15th day

Table 2 shows two different interventions (*Avipattikar Churna and Chitrakadi Kwath*) on patients within a specified age range over a period of 15 days. The follow-up assessments on the 7th and 15th days are designed to monitor and evaluate the outcomes or responses of the patients in both groups.

Data collection tools and process:

Inclusion Criteria

- Patients between the age group of 20 to 60 years of either sex.
- Subjects having classical symptoms of *Amlapitta* like *Amlaudgar* (sour and bitter belching), *Hritkantha daha* (Heart and throat burn), *Udarashula* (epigastric pain), *Aruchi* (Anorexia) and *Utlkesha* (Nausea)
- Patients willing to give consent.

Exclusion Criteria

- Patients having gastric ulcer, duodenal ulcer, gastric cancer.
- Diagnosed patients with uncontrolled Diabetes Mellitus, Cancer, AIDS, and Tuberculosis.
- Patients having a history of heart disease.
- Pregnant and lactating women.

Treatment Period: 15 days.
Follow-up Period: On 0th,7th, 15th day.

Assessment criteria

Table 3: Subjective Parameters with Gradation

SUBJECTIVE PARAMETERS	GRADE 0	GRADE 1	GRADE 2	GRADE 3
Tiktamlaudgar (acid eructation)	No *Amlodgara*	Occasionally, for at least half an hour after meal	After every intake of meal, for half to one hour and relieved by digestion of food or vomiting	For more than an hour, not relieved by any measures
Hrit-kanthadaha (Burning Sensation)	No *Daha*	Occasionally, for more than half hour	Daily for half to one hour	Daily for more than one hour, and relieved by digestion of food or vomiting
Udarashula (epigastric pain)	No *Shool*	Occasional pain that needs no medications	Pain for less than half an hour, relieved by sweets, milk, and antacids	Pain due to ingestion of food, relieved by digestion of food or vomiting
Utklesha (Nausea)	No *Utklesha*	Occasional excess salivation	Occasional nausea, 2-3 times per week	Daily once or twice, after intake of meal
Aruchi (Anorexia)	Absent *Aruchi*	Loss of interest in taking food	Aversion towards food	Nausea after intake of food

Table No.3 outlines subjective parameters and their corresponding grades used for the assessment of symptoms

Table 4: Distribution of subjects according to demographic characteristics

Age (In Yrs)	Group A	Group B	Chi Sq test	P-Value
21-30	5	4	2.9206	0.404024 P >.05 NS
31-40	4	3		
41-50	4	2		
51-60	2	6		
Gender	**Group A**	**Group B**	**Chi Sq test**	**P-Value**
Male	8	7	0.1587	0.715001 P >.05 NS
Female	7	8		
Socio-economic status	**Group A**	**Group B**	**Chi Sq test**	**P-Value**
Lower	6	6	0.4	0.818731 P >.05 NS
Middle	7	8		
High	2	1		
Family History	**Group A**	**Group B**	**Chi Sq test**	**P-Value**
Present	5	4	0.1587	0.1587 P >.05 NS
Absent	10	11		
Addiction	**Group A**	**Group B**	**Chi Sq test**	**P-Value**
Alcoholic	1	2	4.2	0.2407 P >.05 NS
Tobacco	5	1		
Smoking	0	1		
Nil	9	11		
Occupation	**Group A**	**Group B**	**Chi Sq test**	**P-Value**
Service	5	4	1.7302	0.63025 P >.05 NS
Farmer	7	5		
Business	1	1		
Housewife	2	5		

Analysis plan

Subjective Criteria: Chi-Square Test.

The data collected for the outcome variables are classified as qualitative, employing an ordinal scale. This classification adheres to the criterion for variables encompassing more than two categories (Grade Zero, Grade One, Grade Two, and Grade Three). Since the variables are divided into two groups (Group A and Group B), the chi-square test is utilized for analysis.

Since the t-test requires quantitative data for its application, it was deemed inappropriate for this dataset.

Observations and Results

Data collected was analyzed by using Chi Square and the p-value was calculated.

Distribution of patients as per demographic data like Age, Gender, Socioeconomic status, Family history, Addition, and Occupation was statistically non-significant with Chi Sq (2.9, 0.15, 0.4, 0.15, 4.2, 1.73) respectively. Hence, both groups were equal in distribution of patients as per demographic data. (Table 4).

Table 5: Comparison of consumption of spicy/junk food in two groups

Frequent consumpti	Group A	Group B	Chi Sq test	P-Value
Yes	7	7	0	1 P >0.05
No	8	8		

Table 5 shows the distribution of patients as per consumption of spicy/junk food in two groups. It was

statistically non-significant with Chi Sq 0. Hence, both groups were equal in distribution of patients.

Table 6: Comparison of Diet in two groups

Diet	Group A	Group B	Chi Sq	P-Value
Veg	6	10	2.1429	0.143235 P >.05 NS
Mixed	9	5		

Table 6 shows the distribution of patients as per diet in two groups. It was statistically non-significant with Chi Sq 2.14. Hence, both groups were equal in distribution of patients.

Table 7: Comparison of Agni in two groups

Agni	Group A	Group B	Chi Sq	P-Value
Vishamagn	6	5	0.6338	0.888661 P >.05 NS
Tikshnagni	4	6		
Mandagni	4	3		
Samagni	1	1		

Table 7 shows the distribution of patients as per *Agni* in two groups. It was statistically non-significant with Chi Sq 0.63. Hence, both groups were equal in distribution of patients.

Table 8: Comparison of Koshta in two groups

Koshtha	Group A	Group B	Chi Sq test	P-Value
Krura	7	7	0.254	0.880748 P >.05 NS
Madhyam	5	4		
Mrudu	3	4		

Table 8 shows the distribution of patients as per *Koshtha* in two groups. It was statistically non-significant with Chi Sq 0.25. Hence, both groups were equal in distribution of patients.

Table 9: Intragroup comparison on 0th, 7th, and 15th day

I. Tiktamlodgar (Grading)		Grade 3	Grade 2	Grade 1	Garde 0
0th Day	Group A	5	5	5	0
	Group B	6	5	4	0
	Chi Sq Test	0.22			
	P Value	0.90939, P>.05 NS			
7th Day	Group A	2	4	6	3
	Group B	2	5	6	2
	Chi Sq Test	0.3111			
	P Value	0.957925, P>.05 NS			
15th Day	Group A	0	2	6	7
	Group B	0	3	7	5
	Chi Sq Test	0.1692			
	P value	0.0754, P>.05 NS			
II. Hritkanthadaha (Grading)		**Grade 3**	**Grade 2**	**Grade 1**	**Garde 0**
0th Day	Group A	0	4	11	0
	Group B	1	6	6	2
	Chi Sq Test	4.8706			
	P Value	0.1815, P>.05 NS			
7th Day	Group A	0	0	9	6
	Group B	0	1	9	5
	Chi Sq Test	1.0909			
	P Value	0.5796, P>.05 NS			
15th Day	Group A	0	0	3	12
	Group B	0	0	5	10
	Chi Sq Test	0.6818			
	P value	0.409, P>.05 NS			
III. Udarshool (Grading)		**Grade 3**	**Grade 2**	**Grade 1**	**Garde 0**
0th Day	Group A	5	5	5	0
	Group B	6	5	4	0
	Chi Sq Test	0.22			
	P Value	0.9039, P>.05 NS			
7th Day	Group A	2	4	6	3
	Group B	2	5	6	2
	Chi Sq Test	0.3111			
	P Value	0.957925, P>.05 NS			

15th Day	**Group A**	0	2	6	7
	Group B	0	3	7	5
	Chi Sq Test	0.1692			
	P value	0.0754, P>.05 NS			
IV. Utklesha (Grading)		**Grade 3**	**Grade 2**	**Grade 1**	**Garde 0**
0th Day	**Group A**	0	3	5	7
	Group B	0	4	7	4
	Chi Sq Test	1.2944			
	P Value	0.5235, P>.05 NS			
7th Day	**Group A**	0	0	6	9
	Group B	0	1	9	5
	Chi Sq Test	2.7429			
	P Value	0.2537, P>.05 NS			
15th Day	**Group A**	0	0	1	14
	Group B	0	0	6	9
	Chi Sq Test	4.6584			
	P value	0.0309, P>.05 NS			
V. Aruchi(Grading)		**Grade 3**	**Grade 2**	**Grade 1**	**Garde 0**
0th Day	**Group A**	3	4	5	3
	Group B	0	1	8	6
	Chi Sq Test	6.4923			
	P Value	0.09, P>.05 NS			
7th Day	**Group A**	2	2	4	7
	Group B	0	0	8	7
	Chi Sq Test	5.33			
	P Value	0.149, P>.05 NS			
15th Day	**Group A**	0	0	1	14
	Group B	0	0	5	10
	Chi Sq Test	3.33			
	P value	0.0679, P>.05 NS			

Table 9 shows Intragroup comparison on 0th, 7th, and 15th day. In the statistical analysis, all measured values exhibited non-significance, indicating a lack of statistically significant differences. This implies that both groups under investigation can be considered comparable or equal in the context of the assessed variables.

Table 10: Comparison in two groups before and after treatment

	Group A					**Group B**				
I. Tiktamlodgar (Grading)	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**
Grade 3	5	2	0	13.3938	0.03938 P<.05 Significant	6	2	0	13.8675	0.0312 P<.05 Significant
Grade 2	5	4	2			5	5	3		
Grade 1	5	6	6			4	6	7		
Grade 0	0	3	7			0	2	5		
	Group A					**Group B**				
II. Hritkanthadaha (Grading)	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**
Grade 3	0	0	0	24.5217	<0.01 P<.05 Significant	1	0	0	17.9218	0.0064 P<.05 Significant
Grade 2	4	0	0			6	1	0		
Grade 1	11	9	3			6	9	5		
Grade 0	0	6	12			2	5	10		

	Group A					Group B				
III. Udarshool (Grading)	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**
Grade 3	1	0	0	9.2054	0.1623 P>.05 NS	0	0	0	9.8	0.0439 P<.05 Significant
Grade 2	4	1	0			3	1	0		
Grade 1	4	7	5			8	9	4		
Grade 0	6	7	10			4	5	11		
	Group A					**Group B**				
IV. Utklesha (Grading)	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**
Grade 3	0	0	0	10.5466	0.0322 P<.05 Significant	0	0	0	8.1697	0.0856 P>.05 NS
Grade 2	3	0	0			4	1	0		
Grade 1	5	6	1			7	9	6		
Grade 0	7	9	14			4	5	9		
	Group A					**Group B**				
V. Aruchi (Grading)	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**	**At 0th Day**	**At 7th Day**	**At 15th Day**	**Chi Sq**	**P-value**
Grade 3	3	2	0	13.3938	0.0087 P<.05 Significant	0	0	0	3.9876	0.4077 P>.05 NS
Grade 2	4	2	0			1	0	0		
Grade 1	5	4	1			8	8	5		
Grade 0	3	7	14			6	7	10		

Table 10 shows comparison of 0th, 7th, and 15th day in patients of both the groups as per the 5 subjective criterias selected for the study. Group A showed significant results in all the subjective parameters except *Udarshoola* (Abdominal pain). Statistical analysis showed significant results in *Tiktamlodgar, Hritkanthadaha, Utklesha, Aruchi,* with Chi Sq (13.39, 24.52, 10.5, 17.15). Group B showed significant results in all the subjective parameters except *Utklesha* and *Aruchi*. Statistical analysis showed significant results in *Tiktamlodgar, Hritkanthadaha, Udarshool* with Chi Sq (13.86, 17.92, 9.8) respectively.

Discussion

The study aimed to evaluate the efficacy of *Avipattikar churna* and *Chitrakadi kwath* in the management of *Amlapitta* (Hyperacidity), a prevalent condition characterized by the predominance of *Pitta* and associated with the *Annavaha* and *Purishvaha srotas*. Group A, administered with *Avipattikar churna,* exhibited significant improvements in all subjective parameters except *Udarshoola* (Abdominal pain). These findings align with the traditional understanding of *Avipattikar churna* as an effective remedy for *Amlapitta*, targeting symptoms such as *Tikta Amlodgar, Hrit-kanthadaha, Utklesha, and Aruchi.* Group B, receiving *Chitrakadi kwath*, demonstrated substantial results in all subjective parameters, except for *Utklesha* and *Aruchi*. The observed efficacy of *Chitrakadi kwath* in managing *Tikta Amlodgar, Hrit-kanthadaha,* and *Udarashool* contributes valuable insights to its potential role in addressing specific symptoms associated with *Amlapitta*.

The comparative analysis between the two groups highlights nuanced differences in treatment responses. Both interventions proved effective, showcasing strengths in addressing distinct subjective parameters. A decline in symptom scores was observed when comparing the outcomes with those of the initial visit. Patients consistently reported relief from symptoms starting from the second visit, occurring seven days into the treatment for *Amlapitta*. Furthermore, it is noteworthy that none of the participants reported any adverse side effects. The robustness of the study lies in its utilization of oral intake as the mode of treatment, which is widely acknowledged as the most acceptable form of therapy. The variations in outcomes could be attributed to the unique compositions and mechanisms of action of *Avipattikar churna* and *Chitrakadi kwath.* The demonstrated efficacy of both *Avipattikar churna* and *Chitrakadi kwath* holds clinical significance, suggesting their potential roles in managing *Amlapitta* symptoms. These findings contribute to the broader discourse on traditional Ayurvedic interventions as viable options for hyperacidity treatment. Acknowledging the limitations, such as the modest sample size, is crucial. Future research endeavors could explore larger cohorts and extend the study duration to validate and generalize the observed outcomes.

Probable mode of Action of Avipattikar churna (Control Group A):

Avipattikar Churna comprises ingredients that are *Katu, Tikta*, and *Madhura Rasa*, along with *Laghu, Ruksha, Snigdha, Tikshna Guna, Ushna Sheet Virya*, and both *Madhura* and *Katu Vipaka*. Nishotha stands out as the primary component, contributing *Katu Rasa, Laghu, Ruksha, Tikshna Guna, Ushna Virya,* and *Katu Vipaka.* Its noteworthy *Prabhav*-driven *Bhedana* and *Rechana* properties make it effective in inducing *Pitta Virechana,* proving beneficial in addressing *Amlapitta's*

Samprapti bhang. Triphala, another constituent, acts as a mild purgative, while its *Deepana-pachana* quality enhances *Agni,* preventing *Ama* formation. The combination of *Katu Rasa, Ushna Virya, Laghu, Ruksha, Tikshna Guna,* and *Katu Vipaka* aids in alleviating *Kapha*. This alleviation of *Kapha*, in turn, removes the *Avarana* of *Vata*, allowing *Vata* to traverse its path and thereby relieving pain. With 66 parts of *sharkara, Avipattikar Churna* incorporates *Pitta shamaka* properties and *Sheet Virya*, contributing to the pacification of *Pitta* and *Daha*. In a study conducted by Ravte, Rohit & Dixit, Amit Kumar & Mitra, Achintya & Hazra, Jayram & Sharma, Loknath tittled evaluation of the efficacy of avipattikar churna in the management of amlapitta, Patients were treated with *Avipattikar Churna* for 21 days and arbitrary scoring pattern was adopted for the assessment of *Amlapitta*. The results showed that *Avipattikar churna* is a potent drug in the treatment of *Amlapitta* without any adverse drug reactions.

Probable mode of Action of Chitrakadi Kwath (Trial Group B):

Chitrakadi Kashayam's ingredients serve as potent digestive agents, fostering efficient digestion and metabolic processes. Chitrak, or Plumbago zeylanica, is utilized in Ayurvedic medicine to address Amlapitta, a condition synonymous with hyperacidity. The herb is thought to operate through multiple mechanisms to alleviate symptoms associated with excess stomach acidity. It is believed to stimulate digestive processes by enhancing the *Agni* (Digestive fire) and acting as a carminative to relieve gas and bloating. Additionally, Chitrak's anti-inflammatory and anti-acid properties may contribute to reducing inflammation in the gastrointestinal tract and neutralizing excessive stomach acid, providing relief from conditions like heartburn. The herb's potential hepatoprotective effects support liver function, which is integral to overall digestive health. Chitrak is considered to balance the *Pitta dosha*, associated with digestion, helping restore equilibrium to the system. Moreover, the kashayam's metabolism-boosting properties play a pivotal role in eliminating *Aam* and *Amavisha.* Beyond its digestive benefits, Chitrakadi Kashayam exhibits hepatoprotective qualities, enhancing liver functions by reducing elevated liver enzymes and restoring natural liver processes. Additionally, the kashayam's detoxifying prowess contributes to the removal of waste products from the bloodstream, earning it the designation of a potent blood purifier or, more accurately, a detoxifier. *Chitrakadi Vati*, which has *Chitrak* as the main content helps to digest undigested food particles and removes accumulated toxins due to the malabsorption of food particles further improving the digestion and metabolism of the body which is the main cause of several diseases. (14) *Eranda* has been attributed with *madhura-katu kashaya rasa, madhura vipaka,* and *ushna virya* and thus proves useful in alleviating *Doshas. (15) Yava* and *Jawas* are described under *dhanya varga*. They are mainly indicated as *pathya* diet in gastrointestinal disorders. (16)

Conclusion

Avipattikar churna showed significant results in all the subjective parameters except *Udarshoola* (Abdominal pain). *Chitrakadi Kwath* showed significant results in all the subjective parameters except *Utklesha* (Nausea) and *Aruchi* (Anorexia). The observed divergences in outcomes may be ascribed to the distinctive compositions and mechanisms of action inherent in *Avipattikar churna* and *Chitrakadi kwath*. The proven effectiveness of both interventions, *Avipattikar churna* and *Chitrakadi kwath*, carries notable clinical implications, indicating their promising roles in alleviating symptoms. It can be concluded that both the groups were equally effective.

Limitations

The initial study conducted was a time-bound, limited investigation spanning 15 days. To enhance comparability and prevent disease reoccurrence post-treatment, it is imperative to undertake an extended, long-term trial. This extended duration will offer a more comprehensive understanding of the intervention's efficacy and its sustained impact on the condition under scrutiny. Additionally, it allows for a thorough examination of any potential recurrence of the ailment, contributing to a more robust and reliable assessment of the treatment's long-term effectiveness.

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Ethical Consideration

The study was conducted in compliance with ethical standards, having obtained approval from the Institutional Ethics Committee (IEC) at Datta Meghe Institute of Higher Education and Research (Deemed to be University), Sawangi (Meghe), Wardha. The approval letter, numbered MGACHRC/IEC/March-2022/447, signifies that the research protocol was reviewed and granted ethical clearance by the committee. This adherence to ethical guidelines underscores the integrity and credibility of the study.

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