Research Article

A COMPARATIVE CLINICAL STUDY ON THE EFFECTIVENESS OF *VASADI DASHANGA KWATHA* AND *PATOLADI KWATHA* IN *AMLAPITTA* (NON ULCER DYSPEPSIA)

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ABSTRACT

The ignorance about food and present life styles has made people at large to indulge in unwholesome food habits and regimens. Due to this lifestyle and improper diet pattern, there will be metabolic impairment leading to *Amlata* and *Vidhagdhata* of the consumed food. This is recognized as *Amlapitta* in Ayurveda. The *Lakshanas* of *Amlapitta* can be correlated with signs and symptoms of Non-ulcer Dyspepsia. The line of treatment as per allied science is life style changes, use of H2 receptor blocking agents and Proton Pump Inhibitors (PPI). Long term use of these antacids has shown various side effects. The patients with non ulcer Dyspepsia will have regurgitation despite of adequate acid suppression by treatment. It causes significant economic impact due to the long-term management of the disease and costs of possible complications. There is a need for a better medicine which can counter such changes and can reduce *Amlata* and *Vidagdhata* of consumed food. Medicines explained in Ayurveda have the ability to do the same. For this purpose, *Vasadidashanga kwatha* which is explained in *Bhaishajya Ratnavali* in comparison with *Patoladikwatha* as per mentioned in Chakradatta in the management of *Amlapitta* is been undertaken. **Methods:** In Clinical study, 60 patients fulfilling the diagnostic inclusion criteria were selected from OPD and IPD of Hospitals of South Canara and special camps conducted for the same. Patients were divided into 2 groups Group A and Group B and compared with *Vasadidashangakwatha* and *Patoladikwatha* with the standard dosage of *Kwatha* for a period of 30 days. **Results:** Assessment of the total effect of therapy was made by analyzing the data with suitable statistical tests of significance. Overall the test has shown significant result in Group A compared to Group B. **Conclusion:** Both *Vasadidashanga kwatha* and *Patoladi kwatha* showed good results in reduction of signs and symptoms of *Amlapitta*. *Vasadidashanga kwatha* gave better results in comparison with *Patoladikwatha* clinically. The statistical analysis also supported this by concluding that the improvement after treatment is highly significant in Group A (*Vasadidashanga kwatha*) when compared to Group B (*Patoladikwatha*).

KEYWORDS: *Amla pitta*, Non-ulcer Dyspepsia, *Vasadidashanga kwatha*, Patoladi kwatha.

INTRODUCTION

The word *"Amlapitta"* comprised of two words- *Amla* and *Pitta*[1]. In *Amlapitta,* the quantity of *Pachaka Pitta* is increased its quantity of normal bitter taste (alkaline) is changed to more sour taste (acidic) as a result of fermentation. Because of this sour quality of *Pitta,* it is called *Amlapitta.*[2] It is a Disease of gastrointestinal track, due to abnormal secretion of gastric and pancreatic enzymes. In medical science it is described as Acid peptic Disorder. In Ayurveda it is described as *Amlapitta*.

Amlapitta is one of the commonest *Vyadhi* of *Annavahasrotas* (Gastrointestinal track disorder)[3] caused by vitiated *Agni. Amlapitta* is a condition where *Amlaguna* of *Pachakpitta* increases due to *Samata* causing *Vyadhi* condition. Acharya Kashyapa has accepted the involvement of three *Doshas* in

Amlapitta[4] while Madhavakara has accepted the dominance of *Pitta* in this disease. Acharya Charaka has not mentioned *Amlapitta* as separate disease but described in *Grahaniroga* as one of its *Lakshana*. According to Ayurveda many disorders are due to vitiated *Agni*. Due to various factors in the progressive civilization of the present day like speedy environmental changes, adaptation of new food materials, change in method of cooking, atmospheric pollution, encroachment of various chemical agents in newer life style, occupational hazards etc. have precipitated the increasing trend of the diseases. Along with those stimulating factors tremendous stress and anxiety have significantly aggravated the disease including *Amlapitta*. This is a life style problem and those who are addicted with tobacco,

alcohol as well as excess of packaged food rich in salt con-tent can easily caught by this disease.

The *Lakshanas* of *Amlapitta* can be correlated with signs and symptoms of Non ulcer Dyspepsia. Dyspepsia is a term that describes a collection of symptoms that affect the oesophagus (gullet), stomach or duodenum (the first part of the small intestine). It is sometimes called indigestion. Non-ulcer dyspepsia is the diagnosis given to a patient who has symptoms of dyspepsia when no specific medical cause can be found. It is a very common problem, 6 out of 10 people who experience indigestion are diagnosed with non-ulcer dyspepsia. It is also sometimes referred to as 'functional dyspepsia'.

The line of treatment as per allied science is life style changes, use of H2 receptor blocking agents and Proton Pump Inhibitors (PPI). Long term use of these antacids has shown various side effects.

There is a need for a better medicine which can counter such changes and can reduce *Amlata* and *Vidagdhata* of consumed food. Medicines explained in Ayurveda have the ability to do the same. For this purpose, *Vasadidashanga kwatha* which is explained in Bhaishajya Ratnavali in comparison with *Patoladi kwatha* as per mentioned in Chakradatta in the management of *Amlapitta* is been undertaken.

MATERIALS AND METHODS

Source of Data

Literary source

All the Ayurvedic classics, contemporary Ayurvedic literatures, modern texts and internet sources mentioning about the condition, medicine and administration were reviewed and documented for the intended study.

Sample source

Patient who fulfills the inclusion criteria will be randomly selected from OPD and IPD of Teaching hospitals in south Canara and also from referral sources and special camps conducted for the purpose.

Pharmaceutical source

Raw drugs will be procured from authentic sources and preparation of *Kwatha* will be carried out at the Teaching pharmacy attached to Karnataka Ayurvda Medical College, Mangaluru.

Method of preparation

Vasadidashanga Kwatha

Ingredients

Vasa, Amritha, Parpataka, Bhunimba, Nimba, Bringaraja, Haritaki, Vibhitaka, Amalaki and *Kulaka (Patola)*.

Process of drug making: Take equal quantity of the above mentioned ingredients and raise 25gm of their coarsely powdered mix. Decoct it along with water measuring 400ml, till it reduced to one fourth.

*Anupana***:** *Madhu*

Patoladi kwatha

Ingredients: *Patola, Haritaki, Vibhitaka, Amalaki and Nimba.*

Process of Drug Making- Take equal quantity of the above mentioned ingredients and raise 25gm of their coarsely powdered mix. Decoct it along with water measuring 400ml, till it reduced to one fourth.

Anupana: Madhu

Method of collection of data

a. Sample size

A minimum of 60 patients fulfilling the diagnostic and inclusion criteria of either gender will be selected for the clinical study. They will be randomly assigned into two groups A and B with 30 patients each.

Group A: 30 Patients will be administered with *Vasadidashanga kwatha.*

Group B: 30 Patients will be administered with *Patoladi kwatha.*

b. Diagnostic criteria

Patients presenting with the *Lakshanas* of *Amlapitta* will be selected. Associated with one or multiplicity of these:

    i. *Avipaka* (Indigestion)

    ii. *Klama* (Tiredness)

    iii. *Utklesha* (Gastritis)

    iv. *Tiktaamlaudgara* (bitter and sour Belching)

    v. *Hritdaha* (Heartburn)

    vi. *Kantadaha* (Throat burn)

c. Inclusion criteria

    i. Patients presenting with *Lakshanas* of *Amlapitta*.

    ii. Age 1–80 years

    iii. Either sex

d. Exclusion Criteria

    i. Patients suffering from other systemic illness like Diabetes mellitus, Hyperlipidemia, Tuberculosis which interfere with the course of treatment.

    ii. Pregnant and lactating women.

    iii. Patients above age of 80 years

e. Investigations

For diagnosis and exclusion criteria:

    i. Blood Routine: Hb gm%, TC, DC, ESR

    ii. Urine- Albumin, sugar, micro

Procedure and Design of the Study

Plan of Treatment

Included patients will be treated as follows

Table 1: *Vasadidashanga kwatha* Group A

Sample size	30 patients
Drug	*Vasadidashanga kwatha*
Dose	48ml before breakfast and 48ml before dinner with honey 6ml

Table 2: *Patoladikwatha* Group B

Sample size	30 patients
Drug	*Patoladikwatha*
Dose	48ml before breakfast and 48ml before dinner with honey 6ml

Duration of Study

The total duration of the study will be 30 days of active intervention and periodic observation done once in a week during the intervention of drug.

Follow-Up Period: 10th day after completion of the study.

Assessment criteria

All patients to be assessed once a week during the 30 day medication period. Thereafter, follow-up consisted of fortnightly assessments. All the observations will be recorded in the proforma.

Assessment of Results

Assessment of the total effect of therapy will be made by analyzing the data with suitable statistical tests of significance.

Table 3: Grading of the Subjective Parameters

Symptom	Normal (0)	Mild (1)	Moderate (2)	Severe (3)
Avipaka	Absent	Irregular digestion	Indigestion associated with Nausea	Indigestion associated with *Chardi* and *Bhakta Dwesha*
Klama	Absent	Fatigued due to excretion and relieved by rest	Fatigued without excretion, more in the morning	Fatigue associated with heaviness
Utklesa	Absent	In relation with specific food	In relation with normal food	Associated with *Chardi*
Tiktodgara	Absent	Associated with *Avipaka*	Associated with *Hrillasa*	Associated with *Kanthadaha*
Amlodgara	Absent	Associated with *Avipaka*	Associated with *Hrillasa*	Associated with *Kanthadaha*
Hritdaha	Absent	Retrosternal discomfort	Associated with pain	Associated with Gastric regurgitation
Kanthadaha	Absent	Associated with *Avipaka*	Associated with *Utklesha*	Associated with Gastric regurgitation

Statistical Analysis

- Statistical analysis will be done using SPSS package, version 22
- All the qualitative variables are summarized using frequency and percentage.
- The quantitative variables are summarized using mean and standard deviation, median and interquartile range (Q3, Q1)
- Data needs to be analyzed using normal distribution then performing parametric and non parametric tests
- Since all subjective variables are qualitative data, assessment will be done by Wilcoxon sign test and Mann- Whitney test.

OBSERVATIONS AND RESULTS

Out of 60 patients in group A and Group B, 25 patients were female and 35 patients were male. Out of total 60 patients in group A and group B, maximum patients were in age Group 31-40 years. They were 40% and 40% respectively in A and B Group. Out of total 60 patients in Group A and Group B, maximum patients were found moderate Nature of Work. They were 40 (66.7%) in Group A, they were 63.3% and Group B they were 70%. Out of total 60 patients in group A and Group B, maximum patients were of Hindu religion (71.7%). In Group A they were 73.33% of Hindus, while in Group B they were 70% of Hindus. Out of total 60 patients in group A and Group B, maximum patient's occupation are Housewife (31.7%). In Group A 30% and in Group B is 33.33%. Out of total 60 patients in Group A and Group B, maximum patients' Socio Economic Status were middle i.e.: 34 (56.7%). In Group A it was (56.7%) and Group B (56.7%). In the study as a total 60 patients, 36 patients Sleep was disturbed (60%). Among the 30 patients in group A, 17 patients Sleep

was in disturbed (56.7%). Among the 30 patients in group B, 19 patients Sleep was in disturbed (63.3%). Out of total 60 patients in Group A and Group B, maximum patients BMI were 20-31 (85%). In Group A, they were 80% and in Group B they were 90%. Out of total 60 patients in Group A and Group B, maximum patients *Prakruti* were *Kapha Pitta* (33.33%). In Group A, they were 23.33% and in Group B they were 43.33%. Out of total 60 patients in Group A and Group B, maximum patients Diet were mixed (80%). In Group A, they were 83.33% and in Group B they were 76.67%. Out of total 60 patients in Group A and Group B, maximum patients Marital Status were married (73.3%). In Group A, they were 70% and in Group B they were 76.7%. Out of total 60 patients in Group A and Group B, maximum patients Chronicity were up to 1 year (65%). In Group A, they were 70% and in Group B they were 60%. Out of total 60 patients in Group A and Group B, maximum patients Education were upper primary (41.7%). In Group A, they were 46.7% and in Group B they were 36.7%.

RESULTS

In this work of 30 patients studied in *Amlapitta* with *Avipaka lakshana*, Group-A showed 85.71% improvement and Group-B 80% improvement. An assessment of *Klama* in patients of *Amlapitta* before and after the treatment with Group-A showed 96% improvement and Group-B showed 76.54% improvement. Magnitude of *Utklesha* in patients of *Amlapitta* before and after the treatment was 93.51% improvement in Group-A and 75.95% improvement in Group-B. Magnitude of *Tiktodgara* in patients of *Amlapitta* before and after the treatment with Group-A showed 90.91% improvement and Group-B showed 84.62% improvement. Magnitude of *Amlodgara* in patients of *Amlapitta* before and after the treatment in Group-A showed 94.44% improvement and Group-B showed 73.97% improvement. Magnitude of *Hritdaha* in patients of *Amlapitta* before and after the treatment in Group- A showed 97.40% improvement and Group-B showed 81.48% improvement. Magnitude of *Kantadaha* in patients of *Amlapitta* before and after the treatment in Group- A showed 92.41% improvement and Group-B showed 78.82% improvement.

Table 4: The effects of *Vasadi dashanga kwatha* (Group A) on subjective Parameter

Symptom	Mean score				%	S.D (±)	S.E (±)	Wilcoxn Z Value	p value
	BT			BT-AT					
Avipaka	2.33	AT	1.07	1.27	54.29	0.450	0.084	4.78	<0.05
		AF	0.33	2.00	85.71	0.587	0.109	4.78	<0.05
Klama	2.50	AT	1.03	1.47	58.67	0.507	0.094	4.78	<0.05
		AF	0.10	2.40	96.00	0.498	0.093	4.78	<0.05
Utklesha	2.57	AT	1.04	1.53	59.74	0.507	0.094	4.78	<0.05
		AF	0.17	2.40	93.51	0.498	0.093	4.78	<0.05
Tiktodgara	2.57	AT	1.07	1.50	58.44	0.509	0.094	4.78	<0.05
		AF	0.24	2.33	90.91	0.661	0.123	4.78	<0.05
Amlodgara	2.40	AT	1.03	1.37	56.94	0.490	0.091	4.78	<0.05
		AF	0.13	2.27	94.44	0.521	0.097	4.78	<0.05
Hritdaha	2.57	AT	0.94	1.63	63.64	0.615	0.114	4.70	<0.05
		AF	0.07	2.50	97.40	0.630	0.117	4.78	<0.05
Kantadaha	2.63	AT	1.00	1.63	62.03	0.556	0.103	4.70	<0.05
		AF	0.20	2.43	92.41	0.728	0.135	4.78	<0.05

Table 5: The Effects of *Patoladi kwatha* (Group B) on Subjective Parameter

Symptom	Mean score				%	S.D (±)	S.E (±)	Wilcoxn Z Value	p value
	BT			BT-AT					
Avipaka	2.33	AT	1.06	1.27	54.29	0.521	0.097	4.70	<0.05
		AF	0.46	1.87	80.00	0.571	0.106	4.70	<0.05
Klama	2.70	AT	1.07	1.63	60.49	0.490	0.091	4.78	<0.05
		AF	0.63	2.07	76.54	0.521	0.097	4.78	<0.05
Utklesha	2.63	AT	1.07	1.56	59.49	0.504	0.094	4.78	<0.05

		AF	0.63	2.00	75.95	0.643	0.119	4.78	<0.05
Tiktodgara	2.60	AT	1.03	1.57	60.26	0.504	0.094	4.78	<0.05
		AF	0.40	2.20	84.62	0.664	0.123	4.78	<0.05
Amlodgara	2.43	AT	1.03	1.40	57.53	0.498	0.093	4.78	<0.05
		AF	0.63	1.80	73.97	0.551	0.102	4.78	<0.05
Hritdaha	2.70	AT	1.07	1.63	60.49	0.556	0.103	4.70	<0.05
		AF	0.50	2.20	81.48	0.805	0.150	4.78	<0.05
Kantadaha	2.83	AT	1.00	1.83	64.71	0.379	0.070	4.78	<0.05
		AF	0.60	2.23	78.82	0.626	0.116	4.78	<0.05

Table 6: Comparative results of Group-A and Group-B

Signs and Symptoms	Group A (Mean Score)	Group B (Mean Score)	Z-Value of Mann Whitney	U Value	P Value
Avipaka	1.24	1.29	0.32	427.50	>0.05
Klama	1.21	1.47	3.15	236.00	<0.05
Utklesha	1.26	1.44	2.24	297.50	<0.05
Tiktodgara	1.29	1.34	0.87	390.00	<0.05
Amlodgara	1.19	1.37	2.23	298.50	<0.05
Hritdaha	1.19	1.42	2.91	252.00	<0.05
Kantadaha	1.28	1.48	2.74	264.00	<0.05

Table 7: Comparative results of Group A and Group B

Group A	Group B	Mean Difference	SE (±)	Z-Value of Mann Whitney	U Value	P value
93.17	78.95	14.22	1.90	5.40	84	<0.05

Comparative analysis of the overall effect of the treatments in both the groups was done by statistically with Mann Whitney test. The test shows that the treatment is significant in Group A when compared to Group B. Group A overall result is 93.17% and Group B overall result is 78.95%.

DISCUSSION

Amlapitta is a common disorder mainly caused by dietic pattern, mental stress and strain which is related our digestion, Charaka and Kashyapa have clearly indicated that the *Grahani Dosha* and *Amlapitta* occur in the persons who could not check the temptation of food. The *Nidana sevana* create *Mandagni* and due to *Mandagni, Ajirna* is developed and it leads *Amavisha* production. This *Amavisha* mixed with *Pittadi Doshas* and lodes in *Amashaya* then it produces the *Amlapitta* diseases. The *Bruhatrayihas* not mentioned these diseases. Charakahas have given some references about *Amlapitta*. Kashyapahas first mentioned separate chapter on it. Madhavkar & Bhavaprakas have given detailed description on and *Chikitsa* of *Amlapitta*.

Gastritis and non-ulcer dyspepsia disease have been co- related with *Amlapitta* by several M.D. and Ph.D scholars of Ayurveda. Modern medicine is not having proper medicament for gastric disease. Ayurveda has a lot to offer in this regard. Ayurvedic physicians are providing cure for the patients of these type chronic diseases.

In *Amlapitta chikitsa, Shodhana* procedure has given more importance by ancient Acharyas. But it is not used in practice due to more time consumption.

Several single and compound drugs have been tried in this disease. The drugs which are having *Tikta Madhura Rasa, Madhuravipaka, Sheetavirya* and *Laghu Ruksha* property with *Kapha-pittahara* action, used in this diseases.

This study aims at the management of *Amlapitta* by *Shamanavidhi* using *Vasadidashanga kwatha* and *Patoladi kwatha.* The properties of the drugs used like *Tikta rasa*, *Deepana*, and *Pachana* helps in *Ama-pachana* and *Agnideepana.* The ingredients of both these *Kwatha* are easily available, economical and the treatment using them will not affect the daily routine of the individual and would thus provide better patient compliance.

The trail drugs is *Vasadidashanga kwatha*

Vasa: Vasa is considered as one of the best *Pitta shamaka* drug. According to *Ganavargikarana Vasa* is included under *Guduchyadivarga*. The main action on *Dosa* is, it is *Kapha pitta shamaka. Pitta shamaka* due to *Sheetavirya* and *Tiktakashayarasa. Kaphahara* because of *Katuvipaka* and *Tiktakashaya rasa*.

Amritha (Guduchi)

Guduchi acts as rasayana and dhatvagnivardhaka. Due to *Rasayana karma* it gives *Bala* to *Aashaya* which avoid *Punurudhbhava* of any disease. Because of its '*Vichitrapratyarabdha*' property *Guduchi* act as *Tridoshagna, Pitta, Vishashamaka*. It exhibits *Deepana, Pachana, Pitta-saraka Karma* which is useful in *Prakruta pitta nirmana* and it improves *Pachanakriya*. *Haritaki* reduces *Aamashayagataamlata* which is the main *Sampraptighataka* of *Amlapitta*.

Parpataka

Parpataka act as *Trisnahara, Dahahara, Ruchikara* and *Chardighna. Parpataka* is included under *Trishnanigrahanavarga* according to Acharya Charaka and *Guduchyadivarga* according to *Bhavaprakasha. Parpataka* have *Pitta Kaphashamaka* property *Pitta shamaka* because of *Sheetavirya* and *Tikta rasa. Kaphashamaka* due to *Katuvipaka* and *Tikta rasa.*

Bhunimba

Due to its *Tikta rasa*, *Deepana*, and *Pachana* property, It helps in *Ama-pachana* and *Agnideepthi*. *Bhunimba* acts as *Kapha pitta shamaka*, *Pitta shamaka* due to *Tikta rasa* and *Kaphashamaka* because of *Ushnavirya*, *Katuvipaka* and *Tikta rasa.*

Nimba

Nimba acts as *Rucikara, Trishnahara, Krimighna* and *Chardighna*. Acharya Charaka included it under *kandughnavarga*. Acharya Sushrutha included *Nimba* under *Aragvadhadi, Guduchyadu* and *Lakshadigana*. It acts as *Pitta kaphashamaka*, *Pitta shamaka* due to its *Sheetavirya* and *Tiktakashaya rasa*. *Kaphashamaka* due to *Katuvipaka* and *Tiktakashaya rasa.*

Bhringaraja

Due to its *Rasayana* and *Balya* properties, it gives *Bala* to *Aashaya* and avoids *Punarudhbhava* of disease. *Bringaraja* has *Virechana* property which helps in overcoming the *Amadosha.* It has *Kapha Vata hara* property, *Kaphashamaka* because of *Usnavirya, Katuvipaka* and *Katutiktarasa*. *Vatahara* because of *Ushnavirya.*

Haritaki

Haritaki is *Tridosha-shamaka*. It also exhibits *Rasayana karma* by which it gives *Bala* to *Aashaya* and avoids *Punarudhbhava* of disease. Due *to Ruksha guna* and *Kashaya rasa* (*Kashaya rasa* is *Grahigunatmaka*) it reduces *Drava Pitta* which is the responsible factor of *Amlapitta*. It acts as *Deepana, Pachana, Yakrututtejana* which is useful to reduce *Agnimandya* and improve *Pachanakriya*. *Haritaki* acts as *Anulomaka, Mrudu-rechana* and because of this, it is *Vibandha-nashaka.*

Vibhitaki

Vibhitaki is *Tridoshashamaka*. Due to its *Bhedana* property it will ease motion and has laxative action. It is used as an astringent and in the treatment of dyspepsia and diarrhoea. According to Acharya Charaka, it is included under *Virecanopaga* and *Jwarahara*. According to Acharya Sushrutha, under *Mustadi* and *Triphala. Vibhitaki* is *Tridoshashamaka* mainly *kaphashamaka. Kaphahara* cause of *Usnavirya* and *Kashaya rasa, Pittahara* because of *Madhura vipaka* and *Kashaya rasa*, *Vatahara* because of *Ushnavirya* and *Madhuravipaka.*

Amalaki

Amalaki is *Tridoshashamaka*. It acts as *Rasayana* and *Chardighna*. It promotes *Ojas* and Reproductive fluids and is useful in the treatments of ulcers and hyperacidity. Acharya Charaka included it under *Kushtaghna, Kasahara*, *Virechanopaga*, *Jwarahara*, *Vayasthpanavarga. Acharya sushrutha* under *Parusakadigana, Amalakyadigana* and *Triphala. Bhavaprakasha* mention *Amalaki* under *Haritakyadivarga. Amalaki* is *Tridoshashamaka*, *Vatahara* because of *Amla rasa*, *Pittahara* because of *Sheetavirya* and *Madhuravipaka*, *Kaphahara* because of *Rukshaguna* and *Kashaya rasa.*

Kulaka (Patola)

Due to its *Deepana*, *Pachana* and *Balya* properties it is useful in reducing *Angimandya* and improves *Pachanakriya*. *Patolapathra* is mainly indicated in *Amlapitta* and *Agnimandhya*. *Patola* is *Sukhavirechaka* and it exhibits *Samshodhana karma* in *Kapha- Pittajavikaras. Patola* is *Tridoshashamaka*, *Vatahara* because of *Ushnavirya*, *Pitta shamaka* because of *Tikta Rasa* and *Kaphahara* owing to its *Ushnavirya, Katuvipaka* and *Tikta rasa.*

The control drug is *Patoladikwatha*

Patoladi kwatha contains ingredients such as *Patola, Haritaki, Vibitaki, Amalaki* and *Nimba* so it is *Tridosha- shamaka*. It also exhibits *Rasayana karma* by which it gives *Bala* to *Aashaya* and avoids *Punarudhbhava* of disease. Due to *Rukshaguna* and *Kashaya rasa* (*Kashaya rasa* is *Grahigunatmaka*) it reduces *Drava Pitta* which is the responsible factor of *Amlapitta*. It acts as *Deepana, Pachana, Yakrututtejana* which is useful to reduce *Agnimandya* and improve *Pachanakriya*. *Patoladi kwatha* acts as *Anulomaka, Mrudu- rechana* and because of this, it is *Vibandha-nashaka. Patoladi kwatha* is *Tridosha shamaka* mainly *Kaphapitta hara. Kapha shamaka* due to *Katuvipaka* and *Tikta kashaya rasa* and *Pitta shamaka* due to its *Sheeta virya* and *Tikta kashaya rasa.*

Discussion on Observations

Age: A total of 60 patients were involved in the study, of whom 58.3% were males and 41.7% were females. Age of participants ranged from 16 to 80 years, with a mean age of 31-40 years. The probable cause for increasing in this age group may be that the person of this age groups are more exposed towards the changing external environment &mental stress owing to their socio-economical responsibilities i.e. improper *Vihara* and irregularity in diet. *Madhyamavastha* is considered as *Pitta Prakopavaya* and thus, this age group is more prone to suffer from *Pitta* predominant disease.

Sex: In the sample of 60 patients of *Amlapitta*, it was observed that 58.3% of patients are male and 41.7% were female. In this Modern life style, male and female, both are suffered from mental stress, and intake irregular and spicy food which leads to aggravation of the process of *Amlapitta*.

Religion: Religion wise distribution shows Hindus were found 71.7% the total patients. However Muslims were eating spicy and fried foods, non-veg food more commonly. But in present time Hindus are also eating this type of food, and eating pizza, Burger, Idali, Dhosha like fast food. Majority of Hindu may be due to that this region that is near to the hospital belongs to more Hindu population.

Nature of Work: Nature wise distribution shows Moderate nature of work were found 66.7% the total patients. Nature of work also effects on process of *Amlapitta* like the intake of food in time and in proper quantity. People selected for this work mainly belongs to Moderate nature of work.

Occupation: Maximum 31.7% patients were housewife and 16.7% were businessmen. It was observed that most off housewife, was *Diwasvapnasevan* and *Diwasvapnaseva* leads to *Agnimandhya* and *Tridoshaprakopa* and then *Amlapitta*. Businessmen suffered from mental stress as *Amlapitta* is considered as a Psycho-somatic disease.

Socio Economic Status: Maximum number of the patients was 56.7% found in middle socio-economic status group and 35% belong to lower socio-economic status. Due to lower and middle socio-economical condition, the persons were mostly unaware about the food habits. They were habituated to take rough and pungent food which leads to aggravation of the disease process.

Sleep: Maximum number of the patients 60% found to have disturbed sleep. Due to the aggravations of the symptoms of *Amlapitta* almost all patients had Disturbed and Delayed sleep.

Body Mass Index (BMI): Maximum BMI Ranged between 20-30 that is 85% showed this range out of the total 60 patients. Usually persons having Higher BMI used to have the more symptoms of *Amlapitta* due to their nature of work, sedentary life styles and improper intake of food substances. But the area of research work showed maximum range of BMI between 20-30.

Prakruti: 33.3% patients were having *Kapha-Pitta Prakruti*. 33.3% have *Pita Kapha Prakruti* and 16.7% have *Pitta-Vata Prakruti*. *Kapha-Pitta Prakruti* dominant persons were more prone to get *Kaphaja* and *Pittaja* disease. When they take *Mithya AharaVihara* all these *Doshas* get vitiation and produce disease.

Diet: In this present study, 80% patients were Mixed group and 20% patient were in taking Vegetarian diet. Maximum number of the patients (65%) have the habit of irregular food intake. Non vegetarian diet and irregular pattern of food intake lead to *Agnimandhya* and *Tridosha Dusti* which also lead the aggravation of this disease.

Marital Status: Maximum number of the patients was married (73.3%) because this status is related to middle age group. Family involved patients were under stress due to various reasons.

Chronicity: 65% patients were having chronicity of 0 to 12 months and 35% patient were having chronicity 1 year and above. As this is not routine life disturbing disease patients initially does not care of mild symptoms and keep them on self-medication once prescribed by physician. Just as antacid, milk, cold drink. They are attending hospital lately and making this disease chronic in nature. Moreover patients usually indulge in *Apathyasevana* causing chronicity of the disease.

Family History: Maximum number of patients (90%) had absent family history only 3 patients had present family history in *Amlapitta*. Ancient Acharyas are not indicating hereditary predisposition of disease. Modern medicine gives indication of 'O' blood group persons as a hereditary predisposition of this disease. (Acid peptic diseases). The observation of family history suggests that dietic pattern and environment also plays the important role as the 85% of cases had no family history.

Education: 41.7% patients were having Upper primary level and 36.7% were graduates. This incidence is maximum in educated people due to hurried and worried life, irregular diet habit etc

DISCUSSION ON RESULTS

Avipaka

Group A: In this work of 30 patients studied with Group-A, *Avipaka* was a major symptom. Statistical

analysis showed that the mean score which was 2.33 before the treatment was reduced to 1.07after the treatment and after follow up it became 0.33 with 85.71% improvement.

Group B: Statistical analysis showed that the mean score which was 2.33 before the treatment was reduced to 1.06 after the treatment and after follow up it became 0.46 with 80% improvement.

Mode of action: Both the drugs have *Deepana, Pachana, Tikta rasa* which is useful to reduce *Agnimandyatwa,* helps in *Prakruta Pitta nirmana* and it improves *Pachanakriya.* Thus improves the digestion. Here *Vasadidashanga kwatha* showed better improvement.

Klama

Group A: An assessment of *Klama* in patients of *Amlapitta* before and after the treatment with Group-A showed reduction in the mean score from 2.50 to 1.03 after the treatment and after follow up it became 0.10 with 96% improvement.

Group B: An assessment of *Klama* in patients of *Amlapitta* before and after the treatment with Group-B showed reduction in the mean score from 2.70 to 1.07 after the treatment and after follow up it became 0.63 with 76.54% improvement.

Mode of action: *Klama* symptoms was found due to *Amadosha* and *Rasa Dhatu Dusti. Pitta Dosha* responsible for *Mandagni* in *Amlapitta*, was kindled by the *Sheetavirya* and *Tikta kashaya rasa* of *Vasadidashanga kwatha,* and after the intake of *Kashaya*, *Agni* was increased and *Amadosha* was decreased. And so *Rasa Dhatu Dusti* was also relieved in group A more than group B.

Utklesha

Group A: Magnitude of *Utklesha* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-A group showed significant improvement. The mean score which was 2.57 before treatment reduced to 1.04 after the treatment and after follow up it become 0.17 with 93.51% improvement.

Group B: Magnitude of *Utklesha* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-B group showed statistically significant improvement (P<0.05). The mean score which was 2.63 before treatment reduced to 1.07 after the treatment and after follow up it become 0.63 with 75.95% improvement.

Mode of action: *Utklesha* is a specific *Avastha* of *Doshas.* In this *Avastha Dosha* get aggravated in its own *Sthana* and they can mobilize. In *Utklesha, Pitta* and *Kapha Doshas*, *Drava* and *Sandra guna* increases

and also the *Chalaguna* of *Vatadosha.* Due to the *Rukshaguna* and *Kashaya rasa* it reduces *Drava Pitta* and *Sandra guna* of *Kapha.* Thus reduces *Utklesha. Vasadidashanga kwatha* showed better improvement than *Patoladi kwatha.*

Tiktodgara

Group A: Magnitude of *Tiktodgara* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-A group showed significant improvement. The mean score which was 2.57 before treatment reduced to 1.07 after the treatment and after follow up it become 0.24 with 90.91%improvement.

Group B: Magnitude of *Tiktodgara* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-B group showed statistically significant improvement. The mean score which was 2.60 before treatment reduced to 1.03 after the treatment and after follow up it become 0.40 with 84.62% improvement.

Amlodgara

Group A: Magnitude of *Amlodgara* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-A group showed significant improvement. The mean score which was 2.40 before treatment reduced to 1.03 after the treatment and after follow up it become 0.13 with 94.44% improvement.

Group B: Magnitude of *Amlodgara* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-B group showed statistically significant improvement. The mean score which was 2.43 before treatment reduced to 1.03 after the treatment and after follow up it become 0.63 with 73.97% improvement.

Mode of action: Due to the *Tikta rasa* of ingredients of *Kwatha*, it directly act on the *Vidagdha Pitta* and convert it into *Nirama Pitta. Tikta rasa* decreases the *Pitta Dravatavriddhi* thereby pacifying *Amlodgara*. Here *Vasadidashanaga kwatha* showed significant result than *Patoladi kwatha.*

Hritdaha

Group A: Magnitude of *Hritdaha* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-A group showed significant improvement. The mean score which was 2.57 before treatment reduced to 0.94 after the treatment and after follow up it become 0.07 with 97.40% improvement

Group B: Magnitude of *Hritdaha* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-B group showed statistically significant improvement (P<0.05). The mean score which was 2.70 before treatment reduced to 1.07 after the treatment and after follow up it become 0.50 with 81.48%improvement.

Kantadaha

Group A: Magnitude of *Kantadaha* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-A group showed significant improvement. The mean score which was 2.63 before treatment reduced to 1.00 after the treatment and after follow up it become 0.20 with 92.41% improvement.

Group B: Magnitude of *Kantadaha* in patients of *Amlapitta* before and after the treatment was assessed and analyzed statistically. In patients registered in Group-B group showed statistically significant improvement. The mean score which was 2.83 before treatment reduced to 1.00 after the treatment and after follow up it become 0.60 with 78.82% improvement.

Mode of action: *Daha* in *Hrit* and *Kantadesha* is mainly due to *Pitta vriddhi*. The ingredients of both the *Kwata* that is *Amalaki* and *Patola* controls *Daha* due to its *Sheetavirya* and *Nimba Twak* is reported as anti-peptic, analgesic and anti-inflammatory properties which are very much beneficial in this condition.

CONCLUSION

Amlapitta is considered as a Psycho somatic disorder where diet and psychological factors like stress, socio economic status etc. plays an important role in the causation of the disease. *Agnimandya* and *Ama* are the important factors in the pathogenesis of the disease. *Poorvaroopa* of the disease is not mentioned in the classics, some of the *Lakshanas* in mild stage can be considered as *Poorvaroopa* itself. As such co relation to *Amlapitta* in modern science cannot be done but some of the *Lakshana's* of *Amlapitta* is seen in Non ulcer dyspepsia. People with hectic schedule, sedentary lifestyle and indulging in incompatible food habits were seen to be more prone to the disease.

Two *Kashayayogas– Vasadidashangakwatha* and *Patoladikwatha* were taken as the trial drug and control drug respectively. Effect of therapy on each and every sign and symptom was considered and critically analyzed. The results thus obtained were subjected to analytical statistical techniques to compare both types of treatments.

Both *Vasadidashanga kwatha* and *Patoladi kwatha* showed good results in reduction of signs and symptoms of *Amlapitta*. *Vasadidashanga kwatha* gave better results in comparison with *Patoladi kwatha* clinically. The statistical analysis also supported this by concluding that the improvement after treatment is highly significant in Group A (*Vasadidashanga kwatha*) when compared to Group B (*Patoladi kwatha*).

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