

# International Research Journal of Ayurveda & Yoga

An International Peer Reviewed Journal for Ayurveda & Yoga



## Clinical Study of *khandakushmanda Avaleha* And *Patoladi kwatha* on *Amlapitta W.S.R.* GERD (Acidity) - A Pilot Study

Dr. Rakesh Chhimpa<sup>1</sup>, Dr. Khyati Mothaliya<sup>2</sup>, Prof Om Prakash Dadhich<sup>3</sup>

ICV-70.6 ISRA-1.218

VOLUME 4 ISSUE 1 JANUARY 2021

- 1- Assistant Professor, Department of Sharir Kriya, College of Ayurvedic Science and Hospital, Sriganganagar.
- 2- Assistant Professor, Department of Sharir Kriya, Global Institute of Ayurveda, Rajkot.
- 3- Professor and HOD, Department of Sharir Kriya, NIA Jaipur

**Corresponding Author:- Dr. Rakesh Chhimpa**, Assistant Professor, Department of Sharir Kriya, College of Ayurvedic Science and Hospital, Sriganganagar

Article received-2 Jan 2021

Article Accepted-19 Jan2021

Article published 31Jan2021

### ABSTRACT

*Amlapitta* (Acidity) is a burning problem of today's society. This has given rise to many other serious diseases. Now day there is a drastic change in life style of mankind in all aspects due to modernization and industrialization. So, to cope-up with speed, the human beings are adapting to junk food preparations and over work, exposing to stress and sedentary life style resulting into lack of exercises. *Lakshanas*(Symptoms) of *Amlapitta* (Acidity) like *Amlodgara* (sour eructation) *Daha*(burning sensation) are encountered by cardinal signs of GERD such as Gastro-esophageal reflux and gastritis. Usually, patients suffer with heart burning and the condition affects over a number of people widely now a days. The more the condition is novel and recently onset, the more it can treat without difficult. If it lasts with a long duration, more troublesome for treatment. Modern medicines are not having proper effect for gastric diseases. *Ayurveda* offers secure, low cost effective and fruitful management that affordable with all kind of people. Keeping this fact in mind these study is carried out. In this study total 15-15 patients were divided in to two groups by simple random method and administrated it on patients. After complete the trial appropriate statistics were applied. At the end we got very good result that is mentioned in whole paper.

**Key words-** *Amlapitta*, *Daha*, GERD, Acidity.



This work is licensed under a creative attribution -Non-commercial-No derivatives 4.0 International License commons

**How to cite this article:** - Dr.Rakesh Chhimpia, Dr. Khyati Mothaliya, Prof Om Prakash, Clinical Study Of *khandakushmanda Avaleha And Patoladi kwatha* on *Amlapitta* W.S.R. GERD (Acidity) - A Pilot Study, IRJAY, January : 2021 Vol- 4, Issue-1;33-47  
Doi: <https://doi.org/10.47223/IRJAY.2021.4104>

## INTRODUCTION

*Ayurveda*, the science of life enlightens us with enormous ways to live in tune with nature. *Ayurveda* is not only the science of life but also the philosophy of life. Life is a combination of four factors-*Sharir*(body), *Indriya* (Senses), *Satwa* (purity) and *Atma*(soul)<sup>1</sup>. The whole *Ayurvedic* treatment is based on *Dosha*, *Dhatu*(body tissues), and *Mala*. *Acharya Charaka* has given ideal definition of health and disease. According to his view any disturbance in the equilibrium of *Dhatu* (*Dhatuvaishamyā-disturbance in body tissues*<sup>2</sup>) is known as disease and on the other hand the state of their equilibrium (*Dhatuśamyā- (equilibrium in body tissues)*) is health. Disease *Amlapitta*(Acidity) has very long history and it was mentioned in *Kashyapa-Samhita*<sup>3</sup>, *Madhava-Nidana*<sup>4</sup>, *Yogaratanakara*<sup>5</sup> and *Bhavaprakasha*<sup>6</sup>. *Acharya Charaka*, *Sushruta* and *Vagbhata* have not described disease *Amlapitta* in a separate chapter though it has been referred at certain places in their *Samhita*. *Acharya Charaka* mentioned about *Amlapitta* (Acidity) while explaining *ama*(undigested material waste) and *agni dushti*(impaired digestion)<sup>(7)</sup>. *Acharya Kashyapa* has first of all mentioned the disease *Amlapitta*(Acidity) in a separate chapter and he has also mentioned *Manasika bhava* (psychological factors) as a chief cause of this disease as well as the analysis of *Amlapitta* (Acidity) on the basis of *Dosha* has been done by *Acharya Kashyapa*. *Acharya Vagbhata* has described that all the diseases are caused by *Mandagni*<sup>7</sup>. *Nidana sevana*(etiological factors) create *Mandagni* and due to *Mandagni*, *Anidra*(insomnia) is developed and it leads to *Ama*

*visha*(*ama* produces the similar affects like poison) production. Further amalgamation of *ama visha* with *tridosha* is directed forward for accumulation of *ama* in stomach. *Acharya Madhavakar* has given detailed description about this disease including classification of the same according to *Gati*(flow) i.e. *Urdhvagata Amlapitta*(*Amlapitta* presenting in a upward direction) and *Adhogata Amlapitta*(*Amlapitta* presenting in a downward direction). *Chikitsa* of *Amlapitta* has been described by *Bhavmishra*. According to “*Samanya-Vishesha-Siddhanta*<sup>8</sup>” (Principle of Similarity-Dissimilarity) anything which is takes internally, will increase or decrease *Vata*, *Pitta* and *Kapha Dosha* in the body. Those physical substances, environment factors, physical body activities and psychological factors also act like that. According to all the description it could realize that *Pitta* is the predominant *Dosha* in the *Amlapitta*(Acidity). When deliberate, diseases like *Amlapitta*(Acidity) could be detecting specific relationship in between *Pitta* and those adjectives. Normally *Pitta* has *Katu-Rasa*(*Pungent taste*) but when *Katu-Rasa* (*Pungent taste*) is converted into *Amla-Rasa* (*sour taste*), it is called vitiation of *Pitta Dosha*<sup>9</sup>. Vitiating *Pitta* creates several diseases, *Amlapitta* (Acidity) is one of them. Normally *Pitta Dosha* contains the predominance of *Tejas*(*Fire element*) and *Jala bhuta*(*water element*). Especially in this context *Drava*(*Liquid*) and *Ushna Guna*(*hot*) of *Pitta* is increased. According to *Vishesha-Siddhanta* (Principle of Dissimilarity), *Vishesha Dravya* are given in *Amlapitta* to decrease the vitiating *Pitta Dosha*.

## AIMS AND OBJECTIVES

- 1- To find out the efficacy of selected drug *Khandakushmand Avaleha and Patoladi Kwath* in *Amlapitta*(Acidity) .
- 2- Ayurveda Pharmacy as needed for the preparation of '*Khandakushmand Avaleha and Patoladi Kwatha*' in *Amlapitta* (Acidity).

## MATERIAL AND METHOD

### MATERIALS:

**1- Literary Material:** Ayurvedic text books, previous research paper & thesis, different medical books & journals, internet, advice from the learned experts.

**3- Clinical Material:** Sample Size: 30 patients of *Amlapitta* (Acidity) . Source of Data: The study was conducted over 30 patients of OPD of Arogyashala N.I.A. Jaipur.

### 4- Drugs Used In The Study:

- 1) All the medicines were procured from National Institute of Ayurveda.

- 1) Randomized comparative clinical study
- 2) Interventional type

**ALLOCATION OF GROUP--**Patients will be randomly selected in two groups A & B with 15 patients in each group.

1.Group A: *Khandakushmanda Avaleha*- 25gm, twice daily for 30 days with 15th day follow up.

2.Group B: *Patoladi Kwath*-40ml, twice daily for 30 days with 15th day follow up.

### METHODS:

**Research Design:**-The present study is:

## COMPOSITION OF TRIAL DRUG

### *Khandakushmanda Avaleha*<sup>10</sup>

S.No	Sanskrit Name	Latin Name	Part used	Ratio
1.	<i>Kushmanda</i>	<i>Benincasahispida</i>	<i>Swarasa</i>	50 Part
2.	<i>Goksheer</i>	Cowmilk	-	50 Part
3.	<i>Amla</i>	<i>Emblicaofficinalis</i>	Fruit	4 Part
4.	<i>Sarkara</i>	Sugar	-	4 Part
5	<i>Sarpee</i>	-	-	1 Part

**Dose:**25gm, twice a day

**PatoladiKwath<sup>11</sup>**

S.No.	Sanskrit Name	Latin Name	Part used	Ratio
1.	<i>Patola</i>	<i>Tricosanthes dioica</i>	Leaf	1 Part
2.	<i>Haritaki</i>	<i>Terminalia chebula</i>	Fruit	1 Part
3.	<i>Vibhitaki</i>	<i>Terminalia bellirica</i>	Fruit	1 Part
4.	<i>Amla</i>	<i>Emblica officinalis</i>	Fruit	1 Part
5.	<i>Nimba</i>	<i>Azadirachta indica</i>	Bark	1 Part

**Dose:** 40 ml, twice a day.

**Anupana—Madhu(honey)**

◆ **Inclusion criteria: -**

1. Classical symptoms of *Amlapitta* (Acidity).
2. Patients of either sex and between 16-60 years of age.
3. Patients willing and able to carry out treatment for 30 days.
4. Patients will be registered with duly signed informed consent prior to the trial.
5. Chronicity less than 1 year.

◆ **Exclusion criteria:-**

1. Patients with diagnosed cases of gastric, peptic and duodenal ulcers.
2. Patients with any GIT, abdominal complications and chronic illness.
3. Patients with diagnosed cases of any systemic disorder.
4. Pregnant and lactating women.

◆ **Withdrawal criteria:-**

1. Any major disease necessary for starting new treatment modality.
2. Non-compliance of treatment regimen.
3. Adverse drug reactions of the trial drugs

**LABORATORY INVESTIGATIONS:** To diagnose the condition as per contemporary science, its severity, clinical improvement and to assess the possible side effects, certain daily routine tests and investigations were executed. CBC- Investigations

**Ethical clearance:** This study was approved by institutional Ethical Committee (IEC) of National Institute of *Ayurveda* Jaipur vide latter No. IEC/ACA/2017/104 dated 26.4.2017, before starting the clinical trial on patients of *Amlapitta* (Acidity) .

**CLINICAL ASSESSMENT OF AMLAPITTA:** Study of symptomatology of *Amlapitta* (Acidity) was basing on the *Samanya Lakshana* (General symptoms) told in *Madhava Nidana*<sup>12</sup> for the present study.

**Main symptoms:**

- A. *Avipaka*- Indigestion.
- B. *Klama*- Fatigue.
- C. *Utklesha*- Nausea.
- D. *Tiktamlodgara*- Bitter and sour belching.
- E. *Gaurava*- Heaviness of the body.
- F. *Hritkanthadaha*- Burning sensations of the heart and throat.
- G. *Aruchi*- Anorexia.

**CRITERIA FOR THE ASSESSMENT OF AMLAPITTA:**

<b><i>Avipaka (Indigestion)</i></b>	<b>Score</b>
No <i>Avipaka</i> at all	0
<i>Avipaka</i> Occur daily after lunch (remain 4-6 hours) but hunger is Occur in evening.	1
<i>Avipaka</i> Occur daily after lunch but does not have hunger in evening.	2
Always feeling <i>Avipaka</i> and never get hunger.	3

<b><i>Klama(Fatigue)</i></b>	<b>Score</b>
No at all	0
Fatigue without <i>Shrama</i> daily for some times.	1
Fatigue without <i>Shrama</i> daily for long times.	2
Always feels tired and have no enthusiasms all the time of the day	3

<b><i>Utklesha (Nausea)</i></b>	<b>Score</b>
No at all	0
Occasionally but not daily	1
Daily after taking meals (1-2 hours)	2
Frequently and feels <i>Amlasyata and Amla gandha(sour smell)</i>	3

<b><i>Tiktamlodgara(Bitter and sour belching)</i></b>	<b>Score</b>
No <i>Tiktamlodgara</i> (sour eructation)at all	0
Occasionally during day or night for less than half an hour after meals.	1
<i>Tiktamlodgara</i> (sour eructation)after every intake of meals any food substance for half to one hour and relieved by digestion of food or vomiting	2
<i>Tiktamlodgara</i> (sour eructation) disturbing the patient even small amount of fluid regurgitate to patient's mouth	3

<b><i>Gaurava (heaviness of the body)</i></b>	<b>Score</b>
No heaviness of the body	0
Occasionally feeling heaviness of the body	1
heaviness remains up to 6 hours	2
heaviness remains more than 6 hours	3

<b><i>Hritkanthadaha(Burning sensations of the heart and throat)</i></b>	<b>Score</b>
No at all	0
Occasionally	1
Daily after meals for less than 30 min.	2
Daily after meals for more than 30 min.	3

<i>Aruchi (Anorexia)</i>	Score
Willing towards all rasa	0
Willing towards <i>Amla, Lavana</i> and <i>Katu Rasa</i>	1
Unwilling towards foods but can eat foods	2
Unwilling towards foods, cannot eat food.	3

### OVER ALL IMPROVEMENT:

After the completion of treatment, the total effect of therapy was assessed in following categories. The overall percentage of improvement of each patient was calculated by the formula, (Total BT – Total AT) / Total BT X 100.

1. **Complete remission:** - 100% relief in signs and symptoms
2. **Markedly improved:** - 50% - 99%
3. **Moderately improved:** - 25% - 50%
4. **Mild improvement:** - 10% - 25%
5. **Unchanged:** - 0 – 10%

### OBSERVATIONS

1. Maximum numbers of patients i.e. 50% were Female while 50% were Male.
2. Maximum number of patients i.e. 47% belonged to age group of 16-30 years
3. Maximum patients were Hindu (67%) followed by Muslim (33%).
4. Maximum patients i.e. 70% were married while 30% patients were unmarried.
5. Maximum i.e. 57% patients were belonging to middle class, 30% were from poor class and 13% patients were from upper class family.
6. Maximum i.e. 40% patients were house wife, While 40% were student and 17% were businessman & in service each.
7. Maximum i.e. 67% patients were having vegetarian diet, while 33% patients were having mixed type of diet.
8. Maximum i.e. 50% patients were taking *Amla Pradhan Rasa*(sour predominant ) in their diet, 27% were taking *LavanaPradhanRasa* (salty predominant )in their diet and 23% were taking *KatuPradhanRasa* (Pungent Predominant) in diet.
9. Maximum i.e. 53% patients were taking water during meals, 37% were taking water after meals, 10% were taking water before meals.
10. Maximum i.e. 60% patients were under stress, 23% were under Anxiety, 10% were found Anger & 7% were under Depression.
11. Maximum i.e. 77% patients were having habit of *Divaswapna* (day sleep)& 23% this habit was absent.
12. Maximum i.e. 67% patients were tea/coffee, 10% were found to be addicted tobacco chewing & 13% were addicted to Alcohol.
13. Maximum i.e. 63% patients were having *Mandagni* and 37% patients were having *Vishmagni*.
14. Maximum i.e. 54% patients were having *Madhyama Koshtha*(Medium Bowel), 23% patients were having *Mridu & Krura Koshtha* (soft-hard Bowel).
15. Maximum i.e. 47% patients were *Pittja-kaphaPrakriti*, 33% patients were *Vaat-Pitta Prakriti*& 20% patients *Vaat- Kaphaja Prakriti*.
16. Maximum i.e. 70% patients were of *Rajas Prakriti* (Active energy) & 30% patients were of *Tamas Prakriti* (Inertia or dullness).
17. Maximum i.e. 80% patients were of *Madhyam Sara*& 20% patients were of *Avara Sara*.
18. Maximum i.e. 77% patients were of *Madhyam Satva* & 23% patients were of *Avara Satva*.
19. Maximum i.e. 53% patients were of *Madhyam Abhyavaharana Shakti* (capacity/strength of an

individual to consume food) & 23.33% patients were of *Avara Abhyavaharana Shakti*.

20. Maximum i.e. 70% patients were of *Madhyam Jaran Shakti* (medium food intake and digestive

power) and 30% patients were of *Avara Jaran shakti*. (poor food intake and digestive power)

21. 50% patients were of *Bala*(strength) *Vaya*(age) & *Madhyam Vaya*.

## RESULT

- All the calculations were done through **Graph Pad Instat** Software.
- Wilcoxon Signed rank test** Non parametric test for the case of two related samples or repeated measurement on a single test. It was used for the assessment of the improvement in subjective symptom of Group A and B.
- Mann Whitney test-** It was used for comparison of result of symptoms of group A and B.

All the observation made on various parameters were subjective to statistical analysis in terms of mean

S.D. – Standard deviation

S.E. - Standard error

P - Two tail P value

The level of significant as follows-

- Non-significant (NS)  $p > 0.05$
- Significant (S)  $p < 0.05$
- Very significant (VS)  $p < 0.001$  extremely significant
- (ES)  $p < 0.0001$

### 1-Effect on Subjective parameters

**TableNo.1:- Inner group comparison of effect of *Khandkushmanda Avaleha* – Group-A (Wilcoxon matched pairs signed rank test)**

SYMPTOMS	N	Mean		Dif.	% of Change	SD	SE	P	R
		BT	AT						
<i>Avipak</i> (Indigestion).	15	2.13	1.53	0.60	28.13	0.51	0.13	0.0039	VS
<i>Klama</i> (Fatigue.)	15	2.13	1.80	0.33	15.63	0.49	0.13	0.0625	NS
<i>Utklesa</i> (Nausea.)	15	2.13	1.53	0.60	28.13	0.51	0.13	0.0039	VS
<i>Tiktamlodgara</i> (Bitter and sour belching)	15	2.73	1.27	1.47	53.66	0.51	0.13	0.0001	ES
<i>Gaurava</i> (heaviness)	15	1.13	1.07	0.07	5.88	0.26	0.07	0.999	NS
<i>Hritkanthadaha</i> (Burning sensations of the heart and throat.)	15	1.67	0.67	1.00	60.00	0.65	0.17	0.0005	ES
<i>Aruchi</i> (Anorexia)	15	2.07	1.47	0.60	29.03	0.51	0.13	0.0039	VS

**Table No. 2:- Inner group comparison of effect of *Patoladi Kwath* – Group-B (Wilcoxon matched pairs signed rank test)**

SYMPTOMS	N	Mean		Dif.	% of Change	SD	SE	P	R
		BT	AT						
<i>Avipak</i> (Indigestion).	15	2.13	1.40	0.73	34.38	0.49	0.13	0.0020	VS
<i>Klama</i> (Fatigue.)	15	1.87	1.60	0.27	14.29	0.46	0.12	0.1250	NS
<i>Utklesa</i> (Nausea.)	15	2.07	1.13	0.93	45.16	0.59	0.15	0.0005	ES
<i>Tiktamlodgara</i> (Bitter and sour belching)	15	2.13	1.60	0.53	25.00	0.52	0.13	0.0078	VS
<i>Gaurava</i> (heaviness)	15	1.67	1.00	0.67	40.00	0.49	0.13	0.0020	VS
<i>Hritkanthadaha</i> (Burning sensations of the heart and throat.)	15	1.93	1.13	0.80	41.38	0.77	0.20	0.0039	VS
<i>Aruchi</i> (Anorexia)	15	1.93	1.47	0.47	24.14	0.64	0.17	0.0313	NS

- INTER GROUP COMPARISON**

**Table No.3 Intergroup comparison of the subjective parameters of *Amlapitta*: Between Group A & B (Mann Whitney test)**

S.N.	Subjective parameters	Mean Diff. Group- A	Mean Diff. Group- B	U value	P value	R
1	<i>Avipak</i> (Indigestion).	0.60	0.73	105	0.7281	NS
2	<i>Klama</i> (Fatigue.)	0.33	0.27	105	0.7147	NS
3	<i>Utklesa</i> (Nausea.)	0.60	0.93	81	0.1296	NS
4	<i>Tiktamlodgara</i> (Bitter and sour belching)	1.47	0.53	36	0.0004	ES
5	<i>Gaurava</i> (heaviness)	0.07	0.67	45	0.0009	ES
6	<i>Hritkanthadaha</i> (Burning sensations of the heart and throat.)	1.00	0.80	94	0.4287	NS
7	<i>Aruchi</i> (Anorexia)	0.60	0.47	94.5	0.4094	NS



Table No. 4 showing the % improvement of subjective parameters in groups

Symptoms	Result in percentage	
	GROUP A	GROUP B
<i>Avipak</i> (Indigestion).	28.13	34.38
<i>Klama</i> (Fatigue.)	15.63	14.29
<i>Utklesa</i> (Nausea.)	28.13	45.16
<i>Tiktamlodgara</i> (Bitter and sour belching)	53.66	25.00
<i>Gaurava</i> (heaviness)	5.88	40.00
<i>Hritkanthadaha</i> (Burning sensations of the heart and throat.)	60.00	41.38
<i>Aruchi</i> (Anorexia)	29.03	24.14
Average %	31.49%	32.05%

**AVERAGE PERCENTAGE OF RELIEF:**

Comparing the symptomatic improvement in two groups. It was found that average percentage of

relief was in 'Group A' (31.49%) and 'Group B' (32.05%) It shows that effect of therapy was more in Group B comparison to Group A.

**DISCUSSION****EFFECT OF THERAPY*****Avipak* (Indigestion):-**

It is a very important presenting sign in *Amlapitta*(Acidity) The patient is unable to digest even a small quantity of *Aahar*(Food) due to *Agnimandya* and this leads to *Avipak* (Indigestion). *Annavaaha Srotas Dushti* & *Rasa Dushti* may also manifest this symptom. *Deepana*(appetizer), *Pachan*(digestive) properties of *Aushadhi*(medicine) help to resolve *Annavaaha Sroto Dushti*. Which might help to relieve

*Avipak*(Indigestion). Regarding the effect of therapy, result seen in two groups i.e. 28.13%, 34.38% in group A, & B respectively. The result found was very significant in both the groups.

***Klama* (Fatigue):-**

*Klama* (Fatigue) was found due to *Ama Dosha* and *Rasa Dhatu Dushti*. Both *Aushadha yogas* have *Deepana* –*Pachana* (digestive and appetizer), *Rechana* (purgation) and *Pitta Saraka* properties. *Vidagdha Pitta Dosha* is expelled from *Adhomarga* by *Rechana* property (purgation) which is responsible for *Mandagni* in *Amlapitta*.

So, by the *Rechana (purgation)* property, increase in *Agni* was observed and as a result *Ama Dosha* was pacified. *Deepana – Pachana karma (digestive and appetizer)* pacified *Rasa Dhatu Dushti*. Regarding the effect of therapy, result seen in two groups i.e. 15.63%, 14.29% in group A, & B respectively. The result found was Non-significant in both the groups.

#### **Utklesh (Nausea):-**

Due to increased *Dravata* of *Pitta* and *Kapha Dosha*, gastric volume is increased; this exerts pressure on lower esophageal sphincter and leads to *Utklesha (Nausea)*, *Chhardi(vomiting)*. It may be due to *Ama Dosha*. In *Utklesha (Nausea)*, *Kapha Dosha* was prominent. The *Aushadha(medicine) Yoga* consists of *Laghu-Ruksha Guna(light-heavy)* and *Pitta–Kaphahara* properties, which are contraindication to *Kapha Dosha*. So, by these properties it may help to resolve this symptom. Regarding the effect of therapy, result seen in two groups i.e. 28.13%, 45.16% in group A, & B respectively. The result found was very significant in group A & Extremely significant in group B.

#### **Amlodgara (sour eructation)**

*Amlodgara* (sour eructation) is present due to use of *Amla-Katu Rasa Pradhana Ahara* which leads to vitiation of *Pitta Dosha*. Most of the drugs have *Tikta-Kashaya Rasa(bitter - astringent taste)* . which are *Pitta Shamaka*. This might have helped to resolve this symptom. Regarding the effect of therapy, result seen in two groups i.e. 53.66%, 25% in group A, & B respectively. The result found was extremely significant in group A & very significant in group B.

#### **Gaurav (Heaviness):-**

*Gourava* (Heaviness) is again a symptom related to the association of *Kapha* with *Pitta* in the disease *Amlapitta(Acidity)*. *Gourava* (Heaviness) may also be caused by the formation of the undigested food i.e. the *Ama* due the *Agnimandya* which is the result of the *Dravatahavridhhi* ( increase in liquidity) of *Pitta* Causes heaviness of abdomen. The *Aushadha Yoga* consists of *Laghu-Ruksha*

*Guna(light-dry)* and *Pitta–Kaphahara* properties. Regarding the effect of therapy, result seen in two groups i.e. 5.88%, 40% in group A, & B respectively. The result found was Non- significant in group A & very significant in group B.

#### **Hrid- KanthaDaha (burning sensation):-**

This symptom occurs due to vitiation of *Pitta Dosha* by its *Ushna, Tikshna(hot,sharp)* properties. Due to increased *Amlata* and *Dravata* of *Pitta*, regurgitation takes place; it causes irritation of mucous membrane and produces *Daha*. To subside the thirst and burning sensation patient consumes excessive water, cold drinks, milk etc. this leads to excessive *Dravata* and *Agnimandya*. Regarding the effect of therapy, result seen in two groups i.e. 60%, 41.38% in group A, & B respectively. The result found was extremely significant in group A & very significant in group B.

#### **Aruchi:-**

*Aruchi* is *Kapha Dosha* dominant symptom. Which leads *Mandagani*. The *Aushadha Yoga* has *Kapha Nashak* and *Deepan-Pachan(digestive and appetizer)* properties. Regarding the effect of therapy, result seen in two groups i.e. 29.03%, 24.14% in group A, & B respectively. The result found was very significant in group A & significant in group B.

### COMPARISON OF THERAPIES

**Group A:** Patients treated with *Khand kushmanda Avaleha*, extremely significant relief was found in symptoms like *Tiktamlodgara & Hritkanthadaha* while very significant relief was found in symptoms like *Avipaka, Utklesha & Aruchi*.

**Group B:** Patients treated with *PatoladiKwath*, extremely significant relief was found in symptoms like *Utklesha* while very significant relief was found in symptoms like *Avipaka, Tiktamlodgara, Gaurava & Hritkanthadaha*.

Significant relief was found in symptom *Aruchi*.

### Discussion related to Drug Review:

#### PROBABLE MODE OF DRUG ACTION

The basic principles of *Ayurvedic* pharmacology

are capable to explain the mode of action in scientific way. Pharmacology of *Ayurveda* is based on the theory of *Rasa* (taste), *Guna* (Properties), *Virya* (active principles), *Vipak* (Biotransformation) and *Prabhava* (Specific action) which were the simplest parameters in those days

to ascertain the action of the drug. *Acharya Charaka* states that (Cha.Su.26/69) Certain drug act through *Rasa*(taste), some through *Virya*(), some through their *Guna*(quality), some through their *Vipaka* (bio transformation) and some through their *Prabhava*.(specific action)

### Comparative Pharmacodynamic properties of the *Khandakushmanda Avaleha* Study of *Rasa*(Taste)

<i>Rasa</i>	Total	%
<i>Madhura</i>	5/5	100%
<i>Pancharasa</i>	1/5	20%

### Study of *Guna*(Quality)

<i>Guna</i>	Total	%
<i>Guru</i>	3/5	60%
<i>Sheeta</i>	2/5	40%
<i>Snigdha</i>	2/5	40%
<i>Laghu</i>	1/5	20%
<i>Ruksha</i>	1/5	20%

### Study of *Virya*(Active principle)

<i>Virya</i>	Total	%
<i>Sheeta</i>	5/5	100%

### Study of *Vipaka*(Bio transformation)

<i>Vipaka</i>	Total	%
<i>Madhura</i>	5/5	100%

### Study of *Doshakarma*

<i>Doshakarma</i>	Total	Percentage
<i>Pitta-vata shamaka</i>	4/5	80%
<i>Tridosha shamaka</i>	1/5	20%

### Probable Action of *Khandakushmanda Avaleha* in *Amlapitta*

1. The *Dosha* involved in the *Amlapita*(acidity) are *Vata*, *Pitta* & *Kapha*. Pharmacodynamic study of drug shows that the majority of the

drugs have *Madhura Rasa*(sweet taste) (100%) *Madhura Vipak* (100%), *Sheeta Virya*(cold quality) (100%), *Guru*(heavy) (60%), *Sheeta*

- (cold)(40%), *Snigdha* (moistening) (40%) *Ruksha*(dry) (20%), *Laghu*(light) (20%)*Guna* & *Tridosha Shamak* (30%), *Pitta-vata shamaka* property (80%).
- Effect on *Vata*: - *Madhura Rasa* & *Madhura Vipak* of drugs may help to pacify *Vata Dosha*.
  - Effect on *Pitta*: - *Madhura Rasa*, *Madhura Vipak* & *Sheeta Virya* property of drugs may help to pacify *Pitta Dosha*.
  - Effect on *Kapha*: - *Ruksha* & *Laghu Guna* of drugs may help to pacify *Kapha Dosha*.
  - Kushmanda* is *Madhura Rasa*, *Sheeta Virya* and *Madhura Vipaka*. These properties are opposite to *Gunas* of *Pitta* so act as *Pittashamaka*.
  - DravaGuna* of *Pitta* increases in *Amlapitta*(acidity) Some contents of *Khandakushmanda* are *Laghu* (light)and *Ruksha* (rough) in property. So *Laghu* (light) and *Ruksha* (rough) *Guna* perform the function of *Dravansha-Shoshana*(liquification).
  - Kushmanda* is mentioned as *Medhya*(cognition-boosting) drug in classics that work as brain calming agent and relive tension.
  - Amalaki*(acidity) is one of most effective remedy in *Paitika* disorders. Though it neutralizes the vitiated *Vata* and *Kapha Dosha*, but its main action is *Pittashamaka*. So it acts like a good therapeutic agent in *Paitika* disorders and also in *Amlapitta*.
  - Kashaya Rasa* tone up the tissues hastens healing of ulcer. *Amalaki* (*Emblica officinalis*) (being of *Kashaya Rasa* might be rapidly healing the ulcer and toning up the gastric and duodenal mucosa making them more resistant against the action of acid. The procedure might be responsible for normalization of the acid output and increase of mucin levels in the gastric juice.

### Comparative Pharmacodynamic properties of the *Patoladi Kwath*

#### Study of *Rasa*(taste)

<i>Rasa</i>	Total	%
<i>Tikta</i> (bitter)	5/5	100%
<i>Kashaya</i> (Astringent)	4/5	80%
<i>Pancharasa</i>	2/5	40%

#### Study of *Guna*(Quality)

<i>Guna</i>	Total	%
<i>Laghu</i>	4/5	80%
<i>Ruksha</i>	3/5	60%
<i>Guru</i>	1/5	20%
<i>Snigdha</i>	1/5	20%
<i>Sheeta</i>	1/5	20%

### Study of *Virya*(Active principle)

<i>Virya</i>	Total	%
<i>Ushana</i>	3/5	60%
<i>Sheeta</i>	2/5	40%

### Study of *Vipaka*(Bio transformation)

<i>Vipaka</i>	Total	%
<i>Madhura</i>	3/5	60%
<i>Katu</i>	2/5	40%

### Study of *Doshakarma*

<i>Doshakarma</i>	Total	Percentage
<i>Tridosha shamaka</i>	3/5	60%
<i>Kapha-Pitta Shamak</i>	2/5	40%

### Probable Action of *Patoladi Kwath* in *Amlapitta*.

- The *Dosha* involved in the *Amlapitta*(acidity) are *Vata*, *Pitta* & *Kapha*. Pharmacodynamic study of drug shows that the majority of the drugs have *Tikta*(bitter) (100%), & *Kashaya* (astringent)*Rasa* (80%), *Madhura Vipak* (60%) & *Katu Vipak* (40%), *Sheeta Virya* (40%), *Ruksha* (60%), *Laghu* (80%), *Snigdha* (20%) *Guna* & *Tridosha Shamak* (60%), *Kapha-Pitta Shamak* Property (40%).
- In *Amlapitta*(acidity), *Ama* production takes place due to *Agnimandya*(low digestion) this *Ama* on association with *Pitta* leads to *Amlapiita*(acidity), hence due to *Ama* normal *rasa* of *Pitta* changes to *Amla* and causes *Vidagdhatu* (indigestion) of *Pitta* and
- Pitta Shamana*. *Laghu*(light) and *Snigdha Guna*, *Tikta*(bitter) & *Katu*(pungent) *Rasa*, *Katu Vipaka* and *Ushna Virya* stimulate *Agni Rasadhātu*. *Tikta rasa* drugs act directly on vitiated *Rasa dhātu* and converts *Sama Pitta* into *Niramavastha*(without aam)
- Patoladi Kwath* contains *Patola*, *Triphala* and *Nimba*. Most of the drugs having *Tikta*, *Kashaya Ras-Tikta* (bitter-astringent) *Rasa* as main *Rasa* which reduced the excessive *Drava Guna* of *Pitta*. In addition to this *Tikta Rasa* has a specific *Pitta Shamaka* property. Because of its *Laghu*(light) *Guna*, *Tikta* (bitter)and *Katu* (pungent) *Rasa*, *Ushna* (hot) *Virya* and *Katu Vipaka* it subsides the aggravated *Kapha*. On the other hand it counteracts *Vata* with *Snigdha Guna* and *Ushna* (hot) *Virya*. Hence, *Patola* acts as a *Tridoshaghna* with specific effect of and help in the process of digestion. Because of their *Agni Vriddhikara*(increase digestive fire) property they increase digestive power and

digests *Ama rasa* due to their *Dipana*(appetizer) *Pachana*(digestive) action. Due to its *Laghu* (light)*Guna* and *Ushna* (hot) *Virya* it removes *Srotorodh*(channel obstruction) . *Laghu* (light) *Guna*, *Tikta*(bitter)

and *Katu* (pungent) *Rasa*, *Ushna*(hot) *Virya*, *Katu* (bitter) *Vipaka* of *Patola* help to bring down the increased *RasaDhatu* to normalcy. Thus *Patola* acts on *Amlapitta* (acidity) and minimize the process of pathogenesis.

## CONCLUSION

*Agnimandya* (low digestion) is the prime cause for any diseases. *Amlapitta* (acidity) is an exact example for the same and it involves with *Rasa* (channels that carry lymph or plasma, *Rakta*, (circulatory system) *Anna* (the digestive system), and *Pureesha srotas* (Channels that carry faeces).

*Nidana* (etiological factors) induces *agni dushti* and it further manifests with vitiation of dosha towards *Amlapitta* (acidity). *Nidana* (etiological factors) causing *dushti* of *pitta*(vitiated *pitta*) along with *agni dushti*(vitiated digestive fire) should avoid as a step of *upashaya* (alleviating factor).

**Acknowledgement :- Nil**

**Financial Assistant:- Nil**

**Conflict of interest :- Nil**

## REFERENCES

1. Agnivesha, Charaka, Drudhbala, e-Charakasamhita, CCRAS, Designed and developed by National Institute of Indian Medical Heritage, Hyderabad Sutrasthan 1/42
2. Agnivesha, Charaka, Drudhbala, e-Charakasamhita, CCRAS, Designed and developed by National Institute of Indian Medical Heritage, Hyderabad Sutrasthan 9/4
3. Medical Heritage, Hyderabad Sutrasthan 9/4
4. Kashyap samhita(vridhahajivakiya tantra)- Maharshi kashyap- vidyotini hindi.
5. vyakhya- chaukhambha Sanskrit Sansthan- Varanasi- Reprint Vi.Sam. 2067, Page no.335.
6. E-Madhav Nidana, Central Council for research in Ayurvedic sciences(CCRAS).
7. Yoga Ratnakar- with Vidhyotini Hindi Commentary – Edited by- Bhisagratna Bramshankar Shastri, chaukhambha Prakashan- Varanasi.Vi. Sam 2075, Page No-240.
8. Bhavamishra, Bhavaprakasha Samhita, edited by Pandit shri Bramhma Shankar Mishra, Chaukhambha Sanskrit Sansthan Varanasi,Vi. Sam 2062, Madhyakhanda 10, Page no.121.
9. Vagbhatta, Indu., e- Ashtanga Samgraha CCRAS, Designed and developed by National Institute of Indian Medical Heritage, Hyderabad. Nidana 12/1
10. Agnivesha, Charaka, Drudhbala, e-Charakasamhita, CCRAS, Designed and developed by National Institute of Indian

Medical Heritage, Hyderabad Sutrasthan  
1/44

11. Sushruta, Dalhana, e- Sushrutasamhita, CCRAS, Designed and developed by National Institute of Indian Medical Heritage, Hyderabad Sutrasthana 21/11
12. Bhaishajya Ratnavali, Eaditad by Siddhi Nandan Mishra, Chaukhambha Surbharti Prakashan Varanasi- 2012, Page No.912.
13. Yoga Ratnakar- with Vidhyotini Hindi Commentary – Edited by- Bhisagratna Bramshankar Shastri, chaukhambha Prakashan- Varanasi.Vi. Sam 2075, Page No-240.
14. E-Madhav Nidana, Central Council for research in Ayurvedic sciences(CCRAS), <http://localhost:4001/madhavanidana/?mod=read>