

**CLINICAL STUDY TO EVALUATE THE EFFICACY OF VIDANGA CHURNA IN THE MANAGEMENT OF URDHWAGA AMLAPITTA DUE TO *HELICOBACTER PYLORI*****S Manizii<sup>1</sup>, Om Prakash Gupta<sup>2</sup>, Shyamanta Kalita<sup>3</sup>, Ranjan Kalita<sup>4</sup>**

<sup>1</sup>Post graduate scholar, Department of Kayachikitsa, Government Ayurvedic College and Hospital, Guwahati Assam (India) Pin-781014

<sup>2</sup>Professor, Department of Kayachikitsa, Government Ayurvedic College and Hospital, Guwahati Assam (India) Pin-781014

<sup>3</sup>Associate Professor, Department of Kayachikitsa, Government Ayurvedic College and Hospital, Guwahati Assam (India) Pin-781014

<sup>4</sup>Assistant Professor, Department of kayachikitsa, Government Ayurvedic College Hospital, Guwahati Assam (India) Pin-781014

**Corresponding Author:** [maniziiakayina56@gmail.com](mailto:maniziiakayina56@gmail.com)

<https://doi.org/10.46607/iamj03p7062023>

(Published Online: September 2023)

**Open Access**

© International Ayurvedic Medical Journal, India 2023

**Article Received:** 01/08/2023 - **Peer Reviewed:** 05/09/2023 - **Accepted for Publication:** 17/09/2023.

**ABSTRACT**

*Helicobacter pylori* is now the most common cause of gastritis, peptic ulcer disease, gastric cancer and gastric MALT lymphoma. Combination antibiotic therapy is advocated as its first line of treatment. But development of resistance to antibiotics and undesirable side effects makes it very difficult for the effective management of the condition. Therefore, this study was done to evaluate the efficacy of ayurvedic herbs in the management of *Urdhwaga Amlapitta* (gastritis) cause by *H. pylori*. 60 patients were given the trial drug 2gm with 40ml *Shunthi Yastimadhu Kwatha* (Decoction) as *Anupana* (Adjuvent) twice daily after food for 60 days. All the symptoms of *Amlapitta* (*Gastritis*) like *Aruchi* (Anorexia), *Avipaka* (Indigestion), *Hritkantha Daha* (*Heart burn*), nausea vomiting, *Tika Amla Udgara* (Bitter and sour eructation), *Udara Adhmana* (Gaseous distension) *Udara Shula* (Abdominal pain) and *Klama* (Fatigue), Pathologic endoscopy finding results was found to be statistically significant after treatment. The trial drug was found to be well-tolerated, safe and acceptable.

**Key words:** *Krimi, Shunthi Yastimadhu Kwatha, Vidanga Churna, Prakriti Vighatana*

## INTRODUCTION

*H. pylori* is a gram-negative, microaerophilic, flagellated, spiral bacterium usually found in stomach. The bacterium's spiral shape and high motility allow it to penetrate the deep portion of mucosal layer. It produces an enzyme called urease. Urease reacts with urea and produce ammonia and carbon dioxide which lowers the PH and help the bacteria to survive in the acidic environment of stomach [1]. Faecal-oral and oral-oral routes are the most likely routes of transmission. Contaminated water may be a source of infection. Risk factors include consumption of restaurant food, unwashed/ uncooked food, unfiltered water, living in rural developing unhygienic areas and low socio-economic status. The infection is closely linked to chronic gastritis, peptic ulcer disease, duodenal ulcer, gastric cancer and gastric MALT lymphoma. In 1994, WHO declares *H. pylori* as a class 1 carcinogen [2] The treatment for this is triple therapy which includes PPI, clarithromycin amoxicillin and metronidazole and quadruple therapy- bismuth, PPI, tetracycline and nitroimidazole but there is increasing resistance and side effects [2]. In ayurveda, this bacterium can be co related to *Udarad Krimi* (pathogenic organism in stomach) one among the *Sleshmaja Krimi* based on the similarity in its causative factors, shape, site of colonization, signs and symptoms. Infection with *H. pylori* in these patients shows similar clinical features of *Udarad Krimi* like *Arochaka* (anorexia), *Avipaka* (indigestion) *Shula* (abdominal pain) [3] and *Urdhwaga Amlapitta* like *Tikta Amla Udgara* (bitter or sour eructation) *Urodaha* (epigastric burning sensation) *Avipaka* (indigestion) *Utklesha* (nausea) *Gaurava* (lethargy) *Aruchi* (anorexia) [4] Hence this case can be treated as *Urdhwaga Amlapitta* caused by *Udarad Krimi*. The line of treatment for *Krimiroga* described by our acharyas are- 1. *Apakarshana* (removal/expulsion of *Krimi* from the body), 2. *Prakriti Vighatana* (destruction of the fa-

avourable environment for the growth of *Krimi* by the drugs having *Katu Tikta Rasa Ushna Veerya*) and 3. *Nidana Parivarjana* (avoiding the factors required for growth/entrance of *Krimi*) [5] In this scenario, *Vidanga Churna*, can be highlighted under *prakriti Vighatana* as it is counteracting the qualities and factors responsible for survival growth and multiplication of *Krimi*. *Amlapitta Hara Aushadhi* (medicines) was used as *Anupana*. *Nidana Parivarjana* (Avoiding causative factors) and *Pathya* (Wholesome food and habits) was advised.

## AIMS AND OBJECTIVE

1. To evaluate the efficacy of *Vidanga Churna* in *Urdhwaga Amlapitta* due to *H.pylori*.
2. To find out the adverse effects of *Vidanga Churna* (if any).
3. To evaluate the efficacy of *Vidanga Churna* and *Shunthi Yasthimadhu Kwath* as *Anupana* in *Urdhwaga Amlapitta* caused by *H. plori* based on symptomatic relief and to evaluate the changes in upper GI endoscopy after treatment.

## MATERIALS AND METHOD

Total number of 60 patients who fulfilled the inclusion exclusion criteria and gave consent were registered for the clinical study from the OPD and IPD of Kayachikitsa department, Government Ayurvedic College hospital, Ghy-14 after receiving the ethical clearance certificate (ref. no. IEC/2021/250) and registering in Clinical Trials Registry-India with CTRI number- CTRI/2023/05/053006.

The drug *Vidanga* was collected from authentic source and made into *Churna* form at the *Rasashala* (Pharmacy) of GACH Ghy under the guidance of Rasashatra and Bhaisajya Kalpana department. Then it was given for detail analysis at Drug testing laboratory (AYUSH) GACH Guwahati.

Table 1: Drug and Anupana

Sanskrit name	Botanical name	Family	Part used
<i>Vidanga</i>	<i>Embelia ribes</i>	Myrcinaceae	Fruit
<i>Anupana: Shunthi yastimadhu kwatha</i>			
<i>Shunthi</i>	<i>Zingiber officinale</i>	Zingiberaceae	Rhizome
<i>Yastimadhu</i>	<i>Glycyrrhiza glabra</i>	Fabaceae	Root

Dose of *Vidanga Churna*: 2 gm twice daily with lukewarm water after food.

Dose of *Shunthi Yastimadhu Kwatha*: 40 ml

Duration of study: 60 days

Follow up interval: 20 days (3 follow up in 60 days)

#### INCLUSION CRITERIA

- Age- Patients above 20 years and below 60 years
- Patients having clinical features of amlapitta was screened for *H. pylori*
  - Tikta amla udgara*
  - Chardi*
  - Hrillasa*
  - Utklesha*
  - Hritkantha daha*
  - Adhmana*
  - Avipaka*
  - Aruchi*
  - Klama*
  - Gourava*
- H. pylori* positive patients confirmed by upper GI endoscopy with or without other endoscopic findings excluding portal gastropathy, oesophageal varices and gastric ulcers other than superficial ulcer.

#### EXCLUSION CRITERIA

- Age below 20 years and above 60 years
- Pregnant and lactating women
- Patients who are trying to conceive
- Patients suffering from major diseases- Malignancy, TB, STD.
- Patients suffering from oral, pharyngeal, laryngeal infections.
- H. pylori* positive with portal gastropathy, oesophageal varices, gastric and duodenal ulcer except superficial ulcer.

#### ASSESSMENT CRITERIA

A. Subjective criteria:

- Aruchi*

- Avipaka*
- Udara adhmana*
- Udara shula*
- Tiktaamla udgara*
- Hritkantha daha*
- Nausea vomiting*
- Klama*

B. Objective criteria

- Upper GI Endoscopy

#### STATISTICAL ANALYSIS

Data were analysed using SPSS software.

A) Subjective analysis: Friedman ANOVA was adopted to know the effect of treatment in all the 3 follow ups. The results were interpreted as:

- Insignificant if p-value >0.05 and significant(S) if p value < 0.05 at 5% level of significance
- Insignificant if p-value >0.01 and significant(S) if p value < 0.01 at 1% level of significance

B) Objective statistical analysis: Mc Nemar chi-square test was adopted to check if there was any positive change in the pathological finding of upper GI endoscopy after treatment.

#### OBSERVATION AND RESULTS

In the present study, out of 60 patients, 66.7% were male and 33.3% were female. Maximum number of patients belong to age group 20-40 i.e. 58.4%. Regarding food habit/*Aharaja Nidana*, 71% indulge in *Viruddha Ahara*, 65% consume excess *Katu, amla, Lavana*, 75% consume junk food and 91.6% take street food/ food from restaurant, hotel etc frequently, 65% had family history of dyspepsia/ *H. pylori*. Hence, it was observed that the infection was more prevalent in men than in women, age group 20-40 were mostly affected and the dietary habit and family history also contribute to the disease *Amlapitta* due to *H. pylori*.

Table 2: Effect of trial drug on subjective criteria observed in 60 patients

Symptom	N	BT Mean Rank	FU	Mean Rank	DF	Test statistic	P value	Remark
1.Avipaka	60	3.74	F1	2.92	3	141.366	<0.05	S
			F2	1.77				
			F3	1.58				
2.Aruchi	60	3.33	F1	3.18	3	130.308	<0.05	S
			F2	2.04				
			F3	1.44				
3.Udhara Adhmana	60	3.38	F1	2.98	3	112.154	<0.05	S
			F2	2.08				
			F3	1.57				
4.Nausea vomiting	60	3.13	F1	3.02	3	88.940	<0.05	S
			F2	2.01				
			F3	1.83				
5.Hrit Kantha daha	60	3.42	F1	3.15	3	127.979	<0.05	S
			F2	1.91				
			F3	1.52				
6.Tiktaamla Udgara	60	3.52	F1	3.22	3	148.358	<0.05	S
			F2	1.94				
			F3	1.35				
7.Udara Shula	60	3.22	F1	3.04	3	106.141	<0.05	S
			F2	2.02				
			F3	1.73				
8.Klama	60	2.96	F1	2.82	3	65.104	<0.05	S
			F2	2.23				
			F3	2.00				

Table 3: Effect of trial drug on Upper GI endoscopy

	Upper GI endoscopy		N	Chi-square	P value	Remark
BT	<i>H. pylori</i> positive with/without other endoscopic change	<i>H. pylori</i> negative				
	60	0				
AT	No changes in UGI endoscopy	Change in UGI endoscopy				
	29	31	60	29.032	<0.05	S

- i) BT- 60 patients having positive *H. pylori* in Upper GI endoscopy with or without Hyperaemia, mild erosive gastric mucosa, superficial ulcer, gastric mucosal oedema, antral/ fundal /diffuse gastritis, duodenitis.
- ii) AT- 31 patients have some good effect in pathological endoscopic finding either in eradication of *H. pylori*/hyperaemia/erosion/superficial ulcer/gastric mucosal oedema/antral, fundal or diffuse gastritis. whereas 29 patients have no endoscopic changes after treatment.

## DISCUSSION

*Helicobacter pylori* infection plays an important role in the pathogenesis of different gastro-duodenal diseases including *Amlapitta*. A statistically significant result was observed in all the subjective parameters and objective parameter with p value <0.05 as shown in table 2 and 3.

Probable mode of action

*Vidanga*-It has *Katu Rasa* (Pungent taste), *Kashaya Rasa* (Astringent taste), its *Guna* (Quality) is *Laghu* (Light), *Ruksha* (Dry), *Tikshana* (Sharp), *Ushna* (Hot) *Virya* (Potency) and *Katu Vipaka*(Post diges-

tive taste).[6] *Katu Rasa* and *Katu Vipaka* does *Deepana* (Carminative), *Pachana* (Digestive), *Kaphahara* (Bodily humour), *Sroto Shodhana* (Clears channels). *Katu Rasa* is mentioned as a *Krimighna* (Antimicrobial) also [7] The *Ushna Virya* of the drug helped in *Agni Pradeepana*, *Ama pachana* correction of *Dushta kapha* and *Ama* (Toxin) thus relieves *Srotorodha*. *Vidanga* has *Krimighna*, *Deepana*, *Pachana*, *Anulomana* (Downward movement of air), *Shula Adhmana Hara* [6]. Due to its *Anulomana karma* it improves peristaltic movements reducing regurgitation. *Vidanga Churna* if administered along with *Yastimadhu* act as *Krimighna* and *Rasayana* (Rejuvenator) [8] so it also improves the immunity and will be useful to prevent gastric cancer as well. Hence the drug has significant effect on symptoms like *Avipaka*, *Aruchi*, *Adhmana*, *Udara Shula*, *Udgara* (regurgitation) and *klama* (as it is due to *ama*).

*Shunthi*- has *Katu Rasa*, *Guru* (Heavy), *Ruksha*, *Tikshna Guna*, *Usna Veerya* and *Madhura Vipaka*[9]. Its *Katu Ushna Guna*, helps in *Amapachan* and *AG-NIDIPAN*. Hence can help in *Agnimandya* & *ama* symptoms like *Agnimandya*, *Shula*, *Adhmana*, *Vibandha*. Due to its *Madhura Vipaka*, it reduced the burning sensation and protect the mucosal lining. A scientific study shows that *Shunthi* possess gastro-protective and anti-*H. pylori* effect through some mechanisms including 1) antimicrobial effect by anti-adhesive effect and also suppression of bacterial enzymes and bacterial growth; 2) inhibiting gastric acid secretion through blocking H<sup>+</sup>, K<sup>+</sup>- ATPase pump; 3) gastro-protective effect by increasing mucin secretion; 4) anti-oxidative and anti-inflammatory effects which prevent *H. pylori*-induced acute and chronic inflammation [10]

*Yastimadhu*- *Yastimadhu* is having *Madhura Rasa* (sweet taste), *Guru Guna*, *Sheeta Virya* and *Madhura Vipaka* [11], *Madhura Rasa*, *Madhura vipaka* and *Sheeta Virya* is *Pitta Shamana* and *Dahashamaka* (Reduces burning sensation) so it helped in *Hritkantha Daha*, Its *Vranaropana* (Ulcer Healing) and *Shothahara* (Anti-inflammatory) mucous layer protective action helped in erosions, inflammation and superficial ulcers. It is *Chardinigraha* (anti emetics)

so helped in nausea and vomiting. There is considerable amount of pharmacological research on the possible therapeutic value of roots extract as an anti-gastritis and anti-ulcer agent. Glabridin, a flavanoid constituent of the herb has inhibitory activity (in vitro) against *Helicobacter pylori* [12]

#### ADVERSE SIDE EFFECTS/REACTION

No adverse action or side effects was observed in any of the patients. But if *Vidanga churna* was taken without the *Anupana*, an increase in epigastric burning sensation was observed.

#### CONCLUSION

This study focused to manage the *Amlapitta* caused by *H. pylori* infection in a holistic way through the ancient ayurvedic herbs having the properties of antimicrobial, anti *H. pylori*, carminative, digestive stimulant, anti-inflammatory, gastro-protective action, ulcer healing properties along with *Nidana Parivarjana* and *Pathya*. The trial drug *Vidanga Churna* along with *Shunthi Yastimadhu Kwatha* showed a very good response in all the signs and symptoms. This drug alone may not be sufficient to eradicate *H. pylori* in all the cases, but it is recommended to use as a supplementation in *H. pylori* gastritis patients accompanied by significant eradication by enhancing the antibiotic action and reducing its side effects and improving clinical symptoms or it can be used in patients with antibiotic resistance by increasing the dose/duration of treatment or adding more *krimihara* drugs along with *Vidanga Churna*. However, due to the small number of clinical trials in this area, further well-designed clinical trials are needed to explicitly talk about its effectiveness especially for eradication of *H. pylori*.

#### REFERENCES

1. Chatterjee A, Chatterjee S, Bandyopadhyay SK. *H. pylori*-induced gastric ulcer: pathophysiology and herbal remedy. *Int J Biol Med Res*. 2012;3(1):1461-5.
2. Malfertheiner P, Camargo MC, El-Omar E, Liou JM, Peek R, Schulz C, Smith SI, Suerbaum S. *Helicobacter pylori* infection. *Nature reviews Disease primers*. 2023 Apr 20;9(1):19.
3. Agnivesha. *Charaka Samhita*, based on Cakrapani Datta's *Ayurveda dipika*, by Dr Ram Karan Sharma,

- Vimana sthana chapter 7. Chowkhambha Sanskrit Series Office, Varanasi, 202
4. Meenakshi K, Vinteshwari N, Minaxi J, Vartika S. Effectiveness of Ayurveda treatment in Urdhwaga Amlapitta: A clinical evaluation. *Journal of Ayurveda and Integrative Medicine*. 2021 Jan 1;12(1):87-92.
  5. Agnivesha. Charaka Samhita, based on Cakrapani Datta's Ayurveda dipika, by Dr Ram Karan Sharma, Vimana sthana chapter 7. Published by Chowkhambha Sanskrit Series Office, Varanasi, 203
  6. Bhavaprakash, commentary by Padmashri Prof K.C. Chuneekar, edited by late Dr G.S. Pandey, Chaukhamba Bharati Academy, 50.
  7. Agnivesha: Charak Samhita by Acharya C Vidyadhar Shukla, published by Chaukhamba Surbharati Prakash, Varanasi, Edition Reprint (2011), Charaka Samhita Sutrasthan. 17/38 Sutrasthan. 5/31sutrasthan 16/621, 12.
  8. Sushruta Samhita, translated by Prof. K.R. Srikantha Murthy Chikitsa sthana chapter 27/7, Chaukhambha Orientalia 257.
  9. Bhavaprakash, commentary by Padmashri Prof K.C. Chuneekar, edited by late Dr G.S. Pandey, Chaukhamba Bharati Academy, 13,14.
  10. Attari VE, Somi MH, Jafarabadi MA, Ostadrahimi A, Moaddab SY, Lotfi N. The gastro-protective effect of ginger (*Zingiber officinale* Roscoe) in *Helicobacter pylori* positive functional dyspepsia. *Advanced Pharmaceutical Bulletin*. 2019 Jun;9(2):321.
  11. Bhavaprakash, commentary by Padmashri Prof K.C. Chuneekar, edited by late Dr G.S. Pandey, Chaukhamba Bharati Academy, 62,63.
  12. Anilkumar D, Joshi H, Nishteswar K. Review of *Glycyrrhiza glabra* (Yastimadhu)-a broad spectrum herbal drug. *Pharma Science Monitor*. 2012 Dec 1;3(4).

**Source of Support: Nil**

**Conflict of Interest: None Declared**

How to cite this URL: S Maniziia et al: Clinical study to evaluate the efficacy of vidanga churna in the management of urdhwaga amlapitta due to helicobacter pylori. *International Ayurvedic Medical Journal* {online} 2023 {cited September 2023} Available from: [http://www.iamj.in/posts/images/upload/521\\_526.pdf](http://www.iamj.in/posts/images/upload/521_526.pdf)