

**EFFECT OF KUSMANDA KSHARA IN ACID PEPTIC DISEASE CAUSED BY HELICOBACTER PYLORI- A SINGLE CASE STUDY**¹Arsha SS, ²N. Madhuri Devi, ³Soumya VV

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**ABSTRACT**

Helicobacter pylori is a gram-negative bacterium that colonises gastric mucosa and affects up to 50 percent of the population worldwide. It is the main causative factor for producing diseases such as Gastritis, Peptic ulcer, Gastric lymphoma and Gastric carcinoma.

All of the diseases mentioned above are acid-peptic diseases. Kusmanda Kshara prayoga is classically mentioned as a treatment option for different types of Shoola, which closely coincides with the symptoms produced by *Helicobacter pylori*. This paper deals with a case of H pylori managed by Ayurvedic treatment. In this case study, a female presented with gastric irritation and a burning sensation in her stomach came to our Op. The diagnosis of this case was made using objective and subjective parameters. Kusmanda Kshara at a dose of 2 g mixed with 2 g Sunthi churna along with lukewarm water as Anupana in morning, before food was given for 45 days. Assessment of objective criteria using *Helicobacter pylori* stool Antigen test was done before treatment and on the 46th day. Assessment of subjective criteria based on epigastric pain, epigastric tenderness, heartburn, nausea and distension of the abdomen was done before treatment, on the 46th day and on the 61st day. Through this study, we assume that Kusmanda Kshara's internal administration was effective in managing *Helicobacter pylori*.

Keywords: *Helicobacter pylori*, Kusmanda Kshara, Acid peptic disease

INTRODUCTION

Helicobacter pylori is a gram-negative bacterium, spiral-shaped and has multiple flagella at one end naturally colonised humans for at least 50,000 years and lives in gastric mucosa¹. Acid peptic diseases result from distinctive but overlapping pathogenic mechanisms that typically involve acid effects on diminished mucosal defense². It includes diseases such as Gastric ulcers, Duodenal ulcers, and gastroesophageal reflux disease³. This infection's prevalence varies worldwide, from as low as 10% in developed Western nations to as high as 80% in developing countries, including India⁴. In Kerala based on a study conducted on Ernakulam medical college out of 529 patients 62.0% was diagnosed with *Helicobacter pylori* irrespective of gender or age⁵. Acharya Susruta in *Gulma pratisedha* has mentioned different types of *Shoola* and its *Cikitsa*⁶, but it was Acharya Bhavamisra who mentioned *Kusmanda Kshara* in *Shoolaprakaran*⁷. Acharya Vagbhata has considered *Kusmanda* (*Benincasa hispida*) as the best among *Valliphala*⁸. Various chemical constituents of *Kusmanda phala*, like Triterpenes, Sterols, Glycosides, and Flavonoids, have anti-ulcer, antioxidant and anti-inflammatory activity. The Antacid action of *Kusmanda phala* helps to maintain gastric pH and counteracts acidity caused by certain foods⁹. Acharya Charaka in *Sootrasthana* has mentioned *Sunthi* (*Zingiber officinalis*) under *Soolaprasamana Vargas*¹⁰. Even though there are several combination therapies to eradicate *Helicobacter pylori* like Triple therapy, it is only sometimes successful, as *Helicobacter pylori* is developing resistance against antibiotics, that may reduce treatment efficacy¹¹. Given the incomplete cure achieved, undesirable side effects, the cost of the antibiotic regimens, and a few other factors contributing to ineffectiveness, there is an urgent need to develop new treatment strategies for *Helicobacter pylori* infection. As the mainstream medical systems put forth only temporary solutions and symptomatic relief, it is highly required to research a solution from other medical systems.

Hence, this proposed study is carried out to evaluate the effect of *Kusmanda Kshara* on acid peptic disease caused by *Helicobacter pylori*.

CASE REPORT

Patient information

A 42-year-old female presented with severe gastric irritation associated with a burning sensation in the stomach and came to our OPD. She was diagnosed with *H. pylori* after a Gastroenterologist consultation. She did not have any allergies or any family history. She is currently under medication for Hypertension. She had a history of urolithiasis surgery 7 years back, and she also had a history of occasional gastric issues for 4 years and is currently not under any medication for these. Her food habits were non primarily vegetarian, with more fried food, Bakery, Meats and caffeine products. Her appetite is normal, with a history of occasional constipation. One week back, the complaints recurred, and I had a gastroenterologist consultation but didn't get any relief from it. So came to our OP for better management.

Clinical findings

On examination of the digestive system, no abnormal distension or visible palpation was found. The umbilicus was placed normally. No tenderness was found in the epigastric or any other site. On percussion, a normal tympanic and dull sound were noted.

Diagnostic assessment

The examination was done based on our objective and subjective criteria. In objective criteria [*H pylori* stool Antigen test], we found the presence of *H pylori* [42.68 COI], and in subjective criteria, Grade I for epigastric pain, hunger pain and nausea. Grade 3 for heartburn was assessed.

Therapeutic intervention

After careful assessment by objective and subjective criteria, she was administered *Kusmanda kshara*¹² 4g [2g *Kusmanda* and 2g *Sunthi*] orally with lukewarm water as *Anupana* in the morning before food for 45 days.

On the 46th day, a second assessment was taken using the Stool antigen test, and it was found that Hpylori was drastically reduced to 2.74 COI. She also had relief from all symptoms, especially heartburn, gastric irritation along with relief of constipation. The follow-up was done after 15 days. After Assessment, all the symptoms assessed were reduced from grade 3 to grade 0, along with regular bowel movements .

DISCUSSION

H. pylori infection is a worldwide disease, with about half of the world's population harbouring this bacterium in their stomach. The infection is asymptomatic in most individuals. However, it is the leading cause of non-ulcer dyspepsia, peptic ulcers, and gastric tumours. H. pylori can survive in the gastric acidic environment because of its ability to synthesise urease, an enzyme which can neutralise the stomach acidic pH. It seems to play a role in the mechanisms which lead to gastric cancer by inducing methylation in different genes, interfering with apoptotic pathways and causing inflammatory events leading to gastritis, then to atrophic gastritis and possibly to gastric cancer. It may affect the acid secretion of the parietal cells by causing mucosal inflammation. Gastric acid secretion depends on the localisation and the degree of the inflammation. Acute infection with H. pylori results in hypochlorhydria, whereas chronic infection can cause either hypo- or hyper-chlorhydria, depending on the distribution of the infection and the degree of corpus gastritis.

Kusmanda[Benincasa Hispida] is considered the best among Valliphala. Kusmanda kshara prayoga is classically mentioned for different types of Shoola, which closely coincides with the symptoms of h pylori. Many Acharyas have mentioned different types of Shoola and its treatment. But it was Acharya Bhavamisra who mentioned Kusmanda Kshara in Shoola vyadhi. Kusmanda constituent various chemicals like Triterpenes, Sterols, Glycosides, and Flavonoids. The methanol extract of Benincasa hispida has both antiulcerogenic and antioxidant effects. The flavonoids and sterols like phytoconstituents have a gastroprotective activity. The presence of phytochemicals like

carbohydrates, proteins, flavonoids, and synthetic resin compounds also contributes to its antioxidant activity.

The kusmanda phala also has an antibiotic action that helps maintain stomach pH and counteracts acidity. Sunthi [Zingiber officinalis] is a drug that has been used worldwide as a spice as well as herbal medicine for the treatment of various gastrointestinal ailments. This spice contains a variety of volatile and non-volatile compounds . Chemical analysis showed that it contains more than 400 different compounds. The major constituents are carbohydrates[50-70%], lipids[3-8%], terpenes, and phenolic compounds . Terpene components include zingiberene, beta-bisabolene, alpha farnesene, beta-sesquiphellandrene and alpha-curcumene , while phenolic compounds include gingerol, paradols , and shogaol. The gingerols , polyphenolic compounds have a chemopreventive activity by inhibiting the growth of Helicobacter pylori strain along with significant activity against CagA+ strains. Lipophilic extracts such as gingerol and shogal also help in suppression of functional dyspepsia and gastric emptying. Sunthi have anti-oxidative, anti-inflammatory effects, along with gastroprotective action which prevent H pylori . Sunthi is also mentioned by various acharya under shoola prasamana varga .

Through this present study we can come to a conclusion that kusmanda kshara has effect in acid peptic disease caused by H pylori due to its gastroprotective , antiulcerogenic , chemopreventive action of the drug and we need further research article related to this topic for adding answers to our future queries.

CONCLUSION

The combined use of *Kusmanda Kshara* and *Sunthi* demonstrates significant potential in managing acid peptic disease (APD) associated with *H. pylori* infection. *Kusmanda Kshara* exhibits gastroprotective, antioxidant, and antacid properties, while *Sunthi* provides chemopreventive, anti-inflammatory, and anti-ulcer effects, including activity against *H. pylori*. These attributes underline their therapeutic relevance

in addressing both the symptoms and underlying causes of APD.

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