

## CONCEPTUAL CORRELATION OF SLESHMAJA KRIMI ROGA WITH *HELICOBACTER PYLORI* INFECTION: A SYSTEMATIC REVIEW

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### 1. ABSTRACT

This study presents a systematic literary review to explore and correlate the Ayurvedic concept of *Sleshmaja Krimi Roga* with modern understanding of *Helicobacter pylori* infection. Classical Ayurvedic texts, including *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Sangraha*, were analyzed alongside contemporary scientific literature retrieved from databases such as PubMed, Scopus, and standard medical textbooks. The review highlights conceptual similarities between *Krimi Roga* and *H. pylori* infection in terms of etiology, pathogenesis, and clinical manifestations. Ayurvedic descriptions of *Kaphaja Krimi* show notable parallels with gastric colonization by *H. pylori*, including factors such as impaired digestion (*Agnimandya*), accumulation of *Ama*, and involvement of gastrointestinal channels. Modern evidence demonstrates that *H. pylori* colonizes the gastric mucosa, leading to inflammation, mucosal damage, and a spectrum of

clinical conditions ranging from gastritis to peptic ulcer disease and gastric malignancy. The pathogenesis in both systems reflects a progression from initial colonization to inflammatory response and clinical manifestation. Diagnostic approaches and treatment modalities differ; however, both emphasize the importance of eliminating the causative organism and restoring physiological balance. In conclusion, a significant correlation exists between Ayurvedic and

modern perspectives, suggesting that traditional concepts may provide valuable insights into the understanding and management of *H. pylori*-related disorders. This integrative approach may contribute to improved therapeutic strategies and a broader understanding of gastrointestinal diseases.

**2. KEYWORDS:** *Helicobacter pylori*, Sleshmaja Krimi, Krimi Roga, Ayurveda, Gastritis, Peptic Ulcer.

### 3. INTRODUCTION

Gastrointestinal disorders remain a major global health concern, with *Helicobacter pylori* infection playing a central role in the development of conditions such as gastritis, peptic ulcer disease, and gastric malignancy. Despite advances in modern medicine, the understanding of its pathogenesis and management continues to evolve.<sup>[1]</sup> In Ayurveda, the concept of *Krimi Roga*, particularly *Sleshmaja Krimi*, describes disease processes that share notable similarities with microbial infections affecting the gastrointestinal tract. Classical texts detail the etiology, pathogenesis, and clinical manifestations of these conditions, emphasizing factors such as impaired digestion (*Agnimandya*), accumulation of *Ama*, and involvement of gastrointestinal channels.

This study aims to explore and correlate the Ayurvedic concept of *Sleshmaja Krimi Roga* with the modern understanding of *H. pylori* infection through a systematic review of classical and contemporary literature. By integrating traditional knowledge with current scientific insights, the study seeks to provide a comprehensive perspective on disease mechanisms and potential approaches to management.

### 4. MATERIALS AND METHODS

#### 4.1 Study Design

The present study is a systematic literary review conducted to analyse and correlate the concept of Sleshmaja krimi roga described in Ayurveda with the modern *Helicobacter Pylori* infection. The study involved a qualitative and comparative evaluation of classical Ayurvedic text's and contemporary scientific literature.

## 4.2 Data Sources

### 4.2.1 Ayurvedic Literature

Primary data were collected from classical Ayurvedic compendia including: Charaka Samhita, Sushruta Samhita and Vagbhat Samhita along with Laghutrayi Samhita. Relevant commentaries and translations were also reviewed to ensure accurate interpretation of concepts related to Switra, Kushta, Kilasa, and associated pathophysiological principles.

### 4.2.2 Modern Scientific Literature

Secondary data were retrieved from electronic databases: PubMed, Google Scholar, Scopus and standard book's such as Harrison's principles of Internal Medicine, Davidson's principles and practice of Medicine. Search terms used included: *Helicobacter pylori*, Sleshmaja Krimi, Krimi Roga, Ayurveda, Gastritis, Peptic Ulcer

## 5. RESULTS AND DISCUSSION

The systematic review of classical Ayurvedic literature and Helicobacter Pylori infection studies revealed significant correlations between *Sleshmaja Krimi* described in Ayurveda and Helicobacter Pylori infection.

### 5.1 Diseases Review (Ayurveda Classic)

#### 5.1.1 Paribhasa (Definition)

**Definition:** In Ayurveda, the term *Krimi* is used in a broad sense to denote all types of worms as well as microorganisms, aligning closely with the modern scientific understanding of both macro- and micro-organisms. The concept of *Krimi* is not recent; its origins can be traced back to the Vedic period. Ayurvedic literature describes both visible and invisible organisms that influence living and non-living components of the biosphere.<sup>[2]</sup>

#### 5.1.2 Nidan (Etiology)

**Table 1: Causes (Nidana) of Krimi Roga as per Different Ayurvedic Texts.**

Sr. No.	Kind of Krimi	Causes	Texts
1.	Bahya Krimi <sup>[3]</sup>	Yukaa Krimi	Charaka Samhita
		Pippalikaa Krimi	
	Abhayantara Krimi	Kaphaja Krimi <sup>[4]</sup>	
		Mrijavarajana	
		”	
		Dughda, Tila, Guna, Machhali, Aanupa mansha, Misthana, Parmaana, Kusum Sneha, Aajirnaa Bhojana, Puttikinanaa, Sankirna, Virudhha, Asatma Bhojana.	

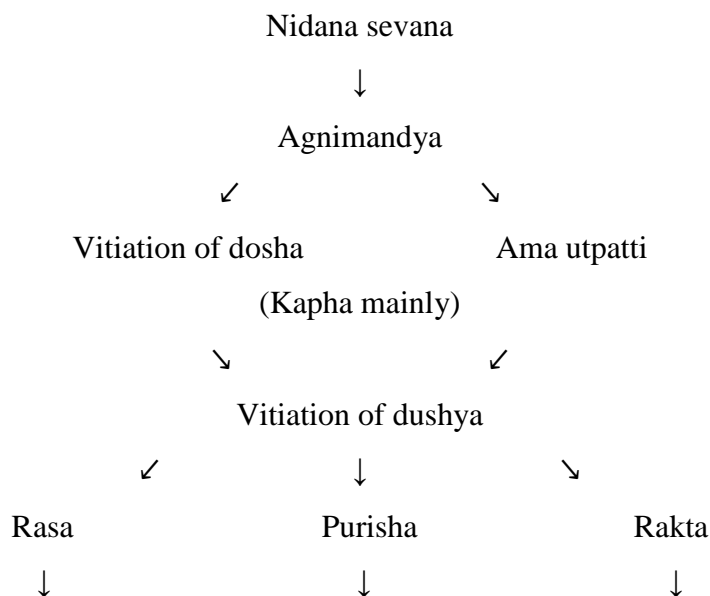
		Raktaja Krimi <sup>[5]</sup>	Kustha roga Samuthana	
		Purishaja Krimi <sup>[6]</sup>	Kaphaja Krimi Samuthana	
2.	bhayantara Krimi	Kaphaja Krimi <sup>[7]</sup>	Mansa, Masha, Guda, Dahi, Dughadha, Ati taila sevana.	Sushruta Samhita
		Raktaja Krimi <sup>[8]</sup>	Virudhha Bhojana, Ajairnaa, Atishaka sevana.	
		Purishaja Krimi <sup>[7]</sup>	Masha, Masha- Anna, Pishthhi, Motha, Vidala, Patrashaka.	
3.	Bahya Krimi <sup>[9]</sup>	Yuka Krimi	Unhygienic conditions	Astanga Sangrah
		Liksha Krimi	”	
	bhayantara Krimi	Kaphaja Krimi <sup>[10]</sup>	Atimadhur, Anna, Guda, Dadhi, Kshir, Saktu, Audana sevana	
		Raktaja Krimi <sup>[11]</sup>	Kustha Hetu	
		Purishaja Krimi <sup>[10]</sup>	Shakrinja, Bahuvinda, Dhanya, Parda, Saka, Auokulya	
4.	Bahya Krimi <sup>[12]</sup>	Yuka Krimi	Rukshta, Atanyatamala, Sweda, Shoka, Kapha, Dhatu Samudabhawa	Harita Samhita
		Liksha Krimi	”	
		Charmadi Krimi	”	
		Charmyukika Krimi	”	
		Binduki Krimi	”	
		Vartula Krimi	”	
		Matkuda Krimi	”	
	Abhayantara Krimi <sup>[13]</sup>	Prithumunda Krimi	Ruksha Anna, Jau, Gaudhuma, Pisthi, Kshir Viparyeda, Guda, Diwaswapana, Kaphaja Padartha, Dhupa, Ushnodaka.	
		Dhanyankuranibha Krimi	”	
		Suchimukha Krimi	”	
		Kinchuksannibha Krimi	”	
		Annawaha Krimi	”	
		Sukshmaha Krimi	”	
5.	Bahya Krimi <sup>[14]</sup>	Yuka Krimi	Sharira, Vastra Malinta, Snana tayaga, Dushita Jala Snana, Twakavikara Rogi Samparaka	Madhava Nidana
		Liksha Krimi	”	
	Abhayantara Krimi <sup>[15]</sup>	Kaphaja Krimi	Mansa, Macchali, Guda, Dughdha, Dadhi, Sukta	
		Raktaja Krimi	Virudhasana, Aajirnasana, Shaka Sevana	
		Purishaja Krimi	Masha, Pisthi, Amla - Lavana Rasa Atisevana	
6.	Bahya	Yuka Krimi	Bahya Karana Samuthana	harangdhara

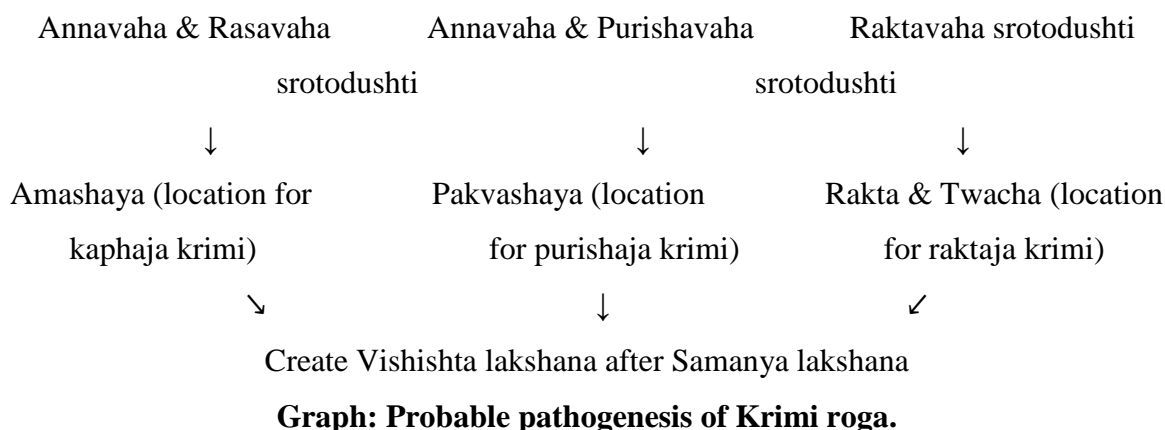
	Krimi <sup>[16]</sup>	Liksha Krimi	”	Samhita
		Vrnaja Krimi	Vrna uttapati	
	bhayantara Krimi	Kaphaja Krimi <sup>[17]</sup>	Kaphaja Uttapati	
		Raktaja Krimi <sup>[18]</sup>	Raktaja Uttapati	
		Purishaja Krimi <sup>[19]</sup>	Purishaja Uttapati	
Kaphaja –Raktaja Krimi <sup>[20]</sup>	Kaphaja-Raktaja Vikara Uttapati			
7.	Bahya Krimi <sup>[21]</sup>	Yuka Krimi	Poor skin Hygiene conditions	Bhavprakasha
		Liksha Krimi	”	
	bhayantara Krimi	Kaphaja Krimi <sup>[22]</sup>	Atiannasevana, Masha, Guda, Dugdha, Dadhi, Shukta.	
		Raktaja Krimi <sup>[23]</sup>	Virudhha Aanapana, Ajirna, Shaka, Rakta Vikara	
		Purishaja Krimi <sup>[24]</sup>	Masha, Pisthi, Amla, Lavana, Guda, Shaka, Faecal matter	
8.	Bahya Krimi <sup>[25]</sup>	Yuka Krimi	Bahya Mala like swedana	Yogratanakara
		Liksha Krimi	”	
	Abhayantara Krimi <sup>[26]</sup>	Kaphaja Krimi	Mansa, Masha, Guda, Dughdha, Dadhi, Shukta	
		Raktaja Krimi	Virudhajirna, Shakaadiati sevana	
		Purishaja Krimi	Masha, Pisthianna, Lavana, Guda, Shaka	

### 5.1.2.2 Vishista Nidan<sup>[4]</sup>

*Sleshmaja Krimi*: Dughdha, Guna, Tila, Machhali, Aanupa mansha, Mithana, Parmaana, Kusum Sneha, Aajirna Bhojana, Puttikinana, Sankirna, Virudhha, Asatma Bhojana.

### 5.1.3 Samprapti





5.1.4 Types

Table 2: Different Number (Sankhya) of krimi as per different Text.

Sr. no.	Different Number of Krimi		Texts	
1.	20	Bahya Krimi <sup>[3]</sup> – 2	Charak Samhita	
		Abhayantara Krimi – 18		7 - Kaphaja <sup>[4]</sup>
				6 - Raktaja <sup>[5]</sup> 5 - Purishaja <sup>[6]</sup>
2.	20	Abhayantara Krimi <sup>[27]</sup> – 20	7 - Kaphaja	
			7 - Raktaja	
			6 - Purishaja	
3.	20	Bahya Krimi <sup>[28]</sup> – 2	Astanga Sangrah	
		Abhayantara Krimi <sup>[28]</sup> – 20		7 - Kaphaja <sup>[29]</sup>
				6 - Raktaja <sup>[30]</sup> 5 - Purishaja <sup>[31]</sup>
4.	13	Bahya Krimi <sup>[32]</sup> – 7	Harita Samhita	
		Abhayantara Krimi <sup>[33]</sup> – 6		
5.	20	Bahya Krimi <sup>[14]</sup> – 2	Madhava Nidana	
		Abhayantara Krimi – 18		7 - Kaphaja <sup>[34]</sup>
				6 - Raktaja <sup>[35]</sup> 5 - Purishaja <sup>[36]</sup>
6.	22	Bahya Krimi <sup>[16]</sup> – 3	Charangdhara Samhita	
		Abhayantara Krimi – 19		7 - Kaphaja <sup>[17]</sup>
				6 - Raktaja <sup>[18]</sup>
				5 - Purishaja <sup>[19]</sup>
1- Kaphaja-Raktaja <sup>[20]</sup>				
7.	20	Bahya Krimi <sup>[37]</sup> – 2	Bhavaprakasha	
		Abhayantara Krimi – 18		7 - Kaphaj <sup>[38]</sup>
				6 - Raktaja <sup>[39]</sup> 5 - Purishaja <sup>[40]</sup>
8.	20	Bahya Krimi <sup>[41]</sup> – 2	Yogratanakara	
		Abhayantara Krimi – 18		7 - Kaphaja <sup>[42]</sup>
				6 - Raktaja <sup>[43]</sup> 5 - Purishaja <sup>[44]</sup>

## 5.1.5 Symptoms

Table 3: Symptoms (Lakshana) of Krimi as per Different Text.

Sr. No.	Kind Of Krimis	Symptoms	Texts
1.	Bahya Krimi <sup>[3]</sup>	Yuka Krimi	Kandu, Kotha, Pidika,
		Pippalika Krimi	”
	bhayantara Krimi	Kaphaja Krimi <sup>[4]</sup>	Michali, Lalasarava, Aruchi, Avipaka, Jwara, Murchha, Jribha, Chavathu, Anaha, Angamarada, Chhardi, Karshaya, Parushya.
		Raktaja Krimi <sup>[5]</sup>	Roma-harsha, Kandu, Toda, Sansarpadi.
	Purishaja Krimi <sup>[6]</sup>	Purishabheda, Karshya, Parushya, Lomaharsha, Gudinishkramadaativellum.	
2.	bhayantara Krimi	Kaphaja Krimi <sup>[47]</sup>	Shiroroga, Hridayaroga, Vamana, Pratishtyaya.
		Raktaja Krimi <sup>[48]</sup>	Kustha, Visharpa, Pidika.
		Purishaja Krimi <sup>[49]</sup>	Shoola, Agnimandhya, Panduta, Vishthambhi, Balanasa, Lalasarava, Aruchi, Hridayaroga, Atisara.
3.	Bahya Krimi <sup>[48]</sup>	Yuka Krimi	Kotha, Pidika, Kandu, Ganda.
		Liksha Krimi	“
	Abhayantaa	Kaphaja Krimi <sup>[50]</sup>	Michali, Lalasarava, Ajirna, Arochaka, Murcha,
	Krimi		Chhardi, Jwara, Anaha, Karshya, Chawathu, Pinus.
		Raktaja Krimi <sup>[30]</sup>	Kustha roga Karaka
		Purishaja Krimi <sup>[51]</sup>	Vidabheda, Shoola, Vishathambhi, Karshya, Parushya, Panduta, Romaharsha, Agnisadana, Gudakandu.
4.	Bahya Krimi	Yuka Krimi	-
		Liksha Krimi	-
		Charmadi Krimi	-
		Charmayukika	-
		Binduki	-
		Vartula	-
	Matakuda	-	
	bhayantara Krimi	Prithumuda	-
		Dhanyankuranbha <sup>[52]</sup>	Krishta, Vridhati, Asthi, Kathorta, Gatra Pida, Hridyakleda.
Suchimukha <sup>[53]</sup>		Antrasidanti, Raktatishara, Yakritabhakshaka, RaktaVaman karaka, Mukhagalani, Aruchi,	

			Jadta, Mandagni, Kampana, Chhuda, Pippasaa, Jwara.	
		Kinchuksannibham	-	
		Annawaha	-	
		Sukshmaha	-	
5.	Bahya Krimi <sup>[14]</sup>	Yuka Krimi	Kotha, Pidika, Kandu, Ganda	Madhava Nidana
		Liksha Krimi	“	
	bhayantara Krimi	Kaphaja Krimi <sup>[54]</sup>	Michali, Lalasarava, Ajirna, Aruchi, Murchha, Chhardi, Jwara, Aanaha, Krishta, Kshawatu, Pinus	
		Raktaja Krimi <sup>[35]</sup>	Kustha roga	
	Purishaja Krimi <sup>[55]</sup>	Vidabheda, Shoola, Mala avrodha, Krishta, Rukshta, Panduta, Romaharsha, Agnimandya, Guda kandu.		
6.	Bahya Krimi	Yuka Krimi	-	Sharangdhara Samhita
		Liksha Krimi	-	
		Vrnaja Krimi	-	
	bhayantara Krimi	Kaphaja Krimi	-	
		Raktaja Krimi	-	
		Purishaja Krimi	-	
	Kaphaja –Raktaja Krimi	-		
7.	Bahya Krimi <sup>[56]</sup>	Yuka Krimi	Kotha, pidika, Kandu, Ganda.	Bhavprakasha
		Liksha Krimi	“	
	bhayantara Krimi	Kaphaja Krimi <sup>[57]</sup>	Hrilasha, Lalasarava, Avipaka, Arochaka, Murchha, Chhardi, Jwara, Ananaha, Kasa, Chhawathu, Pinus.	
		Raktaja Krimi <sup>[39]</sup>	Kustha roga	
	Purishaja Krimi <sup>[58]</sup>	Purisha Gandhaanuidhayani.		
8.	Bahya Krimi <sup>[46]</sup>	Yuka Krimi	Kotha, pidika, Kandu, Ganda.	Yogratanakara
		Liksha Krimi	“	
	bhayantara Krimi	Kaphaja Krimi <sup>[59]</sup>	Hrilasha, Lalasarava, Avipaka, Arochaka, Murchha, Chhardi, Jwara, Ananaha, Kasa, Chawathu, Pinus.	
		Raktaja Krimi <sup>[43]</sup>	Kustha Roga	
		Purishaja Krimi <sup>[60]</sup>	Udagar, Shwasa-Vida Gandhaanuidhayani	

### 5.1.6 Chikitsa

**Table 4: Management (Chikitsa Vyavastha) of krimi as per different Text.**

Sr. No.	Management of Krimi	Text
1.	Apakarshana, Prakriti Vighata, Nidanaparivarajana. <sup>[2]</sup>	Charaka Samhita

2.	Sursadiganavipakwa Sarpi Vamana, Tikshna Yogo Virechana Vakshyama Yavakoladi Kwatha Aathapana. <sup>[62]</sup>	Sushruta Samhita
3.	Snehana, Swedana, Utaklesha (Guda, Kshira) Basti (Sursadigada Aushadha, Cow's urine, Kalka-Kana, Gala, Krimijita, taila, Sarjikshar), Tikshna Virechana (Trivrita Kalka & Phala, Kana Kwatha) Peyadikarma (Pancakola) <sup>[63-65]</sup>	Astanga Sangrah
4.	-	Harita Samhita
5.	Snehana, Swedana, Dravya(Tikta, Usna, Katu, Ruksha), Gomutra, Saindhava, Guda Swedana (Shitoushna Katu taila+Saindhava Lavana). <sup>[66]</sup>	Kashyapa Samhita
6.	-	Madhava Nidana
7.	-	Sharangdhara Samhita
8.	Manda (Anna + Vidanga, Vyosha), Kaphanasaka (Katu-Tikta Bhojana) <sup>[61, ]</sup>	Bhavprakasha
9.	-	Yogratnakara

## 5.2 Disease Review (Modern classic)<sup>[68]</sup>

*Helicobacter pylori* is a gram-negative, spiral-shaped bacterium that has colonized humans since early evolution. It primarily inhabits the gastric mucus layer, occasionally adhering to epithelial cells without systemic spread. Its spiral shape and flagella facilitate motility within mucus. The organism survives in the acidic stomach through adaptive mechanisms, particularly urease production, which generates ammonia to neutralize gastric acid. It is microaerophilic, slow-growing, and requires specific culture conditions. Although rare, other *Helicobacter* species may infect the stomach, often via zoonotic transmission. These typically cause mild inflammation but can occasionally lead to disease, especially in immunocompromised individuals, where some species may produce symptoms similar to *Campylobacter* infection.

## EPIDEMIOLOGY

The prevalence of *H. pylori* infection varies widely across populations. In many developing regions, colonization rates among adults may reach up to 80%. In contrast, prevalence in developed countries shows an age-related pattern, affecting approximately 50% of individuals aged 60 years, 20% of those aged 30 years, and less than 10% of children. Infection is usually acquired during childhood. The observed age-related distribution reflects a birth-cohort effect rather than ongoing adult acquisition, as both new infection and spontaneous clearance in adulthood are relatively rare.

### Transmission

Humans are the primary reservoir of *H. pylori*, with transmission usually occurring during childhood through close contact, either within families or between children. Familial spread is more common in developed regions, while child-to-child transmission predominates in developing settings. Although the exact route remains unclear, fecal–oral and oral–oral pathways are considered likely. The organism is more frequently detected in vomitus and gastric secretions than in stool.

### Pathology and Determinants of Disease

Most individuals infected with *H. pylori* remain asymptomatic, and disease progression depends on interactions between bacterial virulence, host genetics, and environmental factors. Host susceptibility is influenced by genetic variations affecting immune responses, particularly cytokines and pattern-recognition receptors such as Toll-like receptors; for example, increased interleukin-1 production is linked to a higher risk of gastric cancer. Environmental factors also contribute, with smoking and diets high in salt or preserved foods increasing disease risk, while antioxidant-rich diets, including vitamin C, may provide some protection.

### Pathogenesis

The development of disease typically occurs in three stages:

1. Initial colonization facilitated by bacterial virulence factors
2. Induction of mucosal injury through inflammatory mediators
3. Clinical manifestation of disease

### Comparison of *H. pylori* and Sleshmaja krimi

	Sleshmaja krimi	H. Pylori
Nidan /Cause	Dughdha, guda, tila, machhali, anup mansha, anirnay bhojana, sankirna, viruddha, asatmya bhojana	Contaminated source-Water, Vegetables, Food
Sthan/Habitat	Amashya	Stomach
Form	Shwet, Prithu, Braghna, Gola, Chaude, Ganduada Samana, Shweta and Tamra Sadrishya Rakta, Shukshma, Shwet Dirgha Sutra Sadrishya.	S-shaped (~0.5- μm in size) with multiple sheathed flagella
Lakshan/Symptoms	Michali, Lalasarava, Aruchi, Avipaka, Jwara, Murchha, Jribha, Chavathu, Anaha,	Anorexia, Heartburn, Dyspepsia, Bloating, Belching, Vague epigastric pain, Nausea, Vomiting, Weight loss

Angamarada, Chhardi, Karshaya, Parushya.
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### Virulence Factors<sup>[69]</sup>

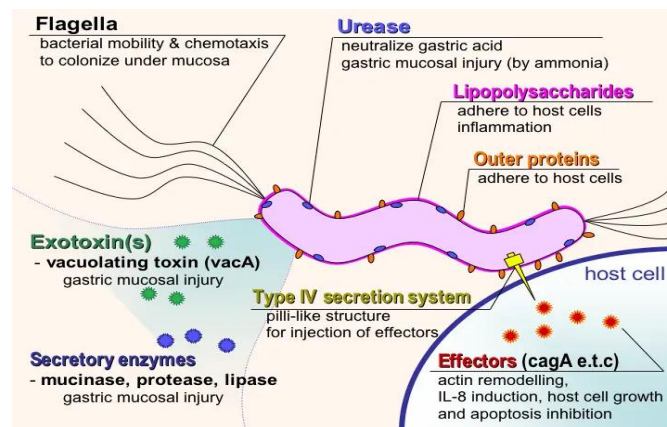


Figure 1: Virulence factor of *H. pylori*.

### Tissue damage through inflammatory mediators

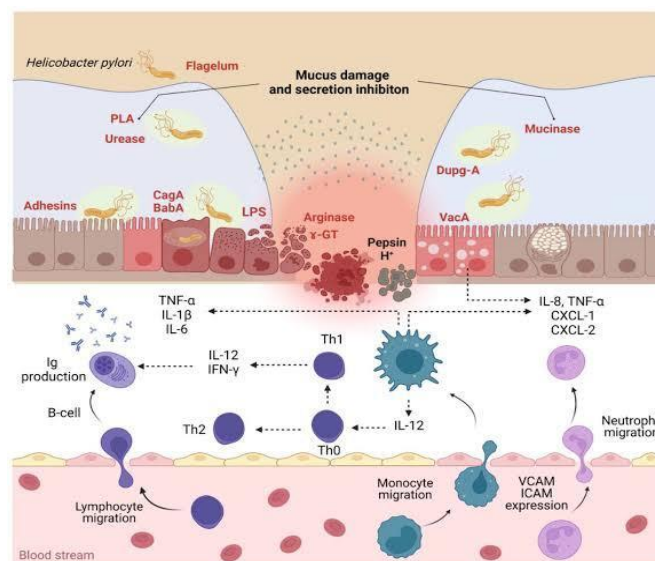


Figure 2: Showing tissue damage through inflammatory response.

### Pathogenic Sequence of Infection

Following colonization by *Helicobacter pylori*, the disease process evolves through a series of coordinated events

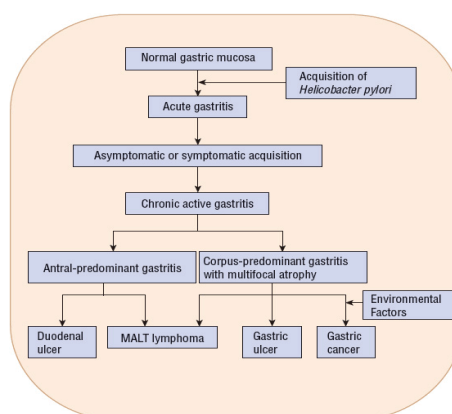
1. The organism initially adheres to epithelial cells, particularly at intercellular junctions.
2. It induces cellular injury, partly mediated by the vacuolating cytotoxin VacA, leading to cell damage and lysis.
3. The bacteria and associated inflammatory processes extend into deeper layers, including the lamina propria.

4. The CagA protein disrupts intracellular signaling pathways, triggering cytokine-mediated inflammatory responses.
5. This results in recruitment of neutrophils, which attempt phagocytosis and contribute to the inflammatory milieu.
6. The inflammatory response becomes amplified, leading to sustained tissue injury.
7. Infected epithelial cells exhibit reduced mucin production, causing thinning of the protective mucosal barrier and allowing gastric acid to directly injure the epithelium.
8. Activation of immune cells, including T lymphocytes and monocytes, leads to the release of inflammatory mediators such as interferon- $\gamma$ , interleukin-6, prostaglandins, and reactive oxygen species.
9. Interferon- $\gamma$  and interleukin-6 further stimulate B lymphocytes, promoting antibody production.
10. These mediators not only sustain inflammation but also directly damage epithelial cells, perpetuating mucosal injury.

### Disease Manifestations Associated with *H. pylori*

Infection with *H. pylori* is associated with a spectrum of gastrointestinal disorders:

1. **Gastritis (more than 85%):** Includes acute and chronic forms, as well as antral, pangastritis, atrophic, and non-atrophic variants.
2. **Peptic ulcer disease (~15%):** Encompasses both duodenal and gastric ulcers
3. **MALT lymphoma (<1%):** A low-grade B-cell lymphoma arising from mucosa-associated lymphoid tissue
4. **Gastric adenocarcinoma (~1%):** A significant long-term complication linked to chronic infection.



**Figure 3: Diseases associated with *H. pylori*.**

### Clinical Features of *H. pylori* Gastritis

Patients may present with a range of nonspecific upper gastrointestinal symptoms, including:

- Loss of appetite
- Heartburn
- Dyspepsia
- Abdominal bloating
- Belching
- Ill-defined epigastric discomfort
- Nausea and vomiting
- Intolerance to spicy or fatty foods
- Unintentional weight loss

### Functional Dyspepsia<sup>[70]</sup>

Functional dyspepsia presents with upper gastrointestinal symptoms despite normal endoscopy. Some patients may be colonized with *H. pylori*. Eradication therapy offers only limited benefit, with modest improvement in a minority of cases. The exact reason for this response remains unclear. Nevertheless, current guidelines recommend eradication due to the chronic and persistent nature of the condition.

### DIAGNOSIS<sup>[71]</sup>

Tests for *H. pylori* fall into two groups: tests that require upper gastrointestinal endoscopy and simpler tests that can be performed in the clinic.

**Table 5: Methods for diagnosis of *H. pylori* infection.**

Test	Advantages	Disadvantages
<b>Non-invasive</b>		
Serology	Rapid office kits available Good for population studies	Lacks specificity Cannot differentiate current from past infection
<sup>13</sup> C-urea breath test	High sensitivity and specificity	Requires expensive mass spectrometer
Faecal antigen test	Cheap, specific (> 95%)	Acceptability
<b>Invasive (antral biopsy)</b>		
Histology	Specificity	False negatives Takes several days to process
Rapid urease test	Cheap, quick, specific (> 95%)	Sensitivity 85%
Microbiological culture	'Gold standard' Defines antibiotic sensitivity	Slow and laborious Lacks sensitivity

### Indications for Testing *H. pylori*<sup>[71]</sup>

Evaluation is strongly indicated in the following conditions:

- Current or previous history of peptic ulcer disease
- Extranodal marginal zone lymphoma of mucosa-associated lymphoid tissue (MALT) type
- Patients who have undergone endoscopic resection for early gastric carcinoma
- Individuals presenting with dyspeptic symptoms
- Long-term users of nonsteroidal anti-inflammatory drugs (NSAIDs) or low-dose aspirin
- Certain extra-gastric conditions, including idiopathic thrombocytopenic purpura, unexplained iron deficiency anemia, and unexplained vitamin B12 deficiency

Routine testing is generally not recommended in:

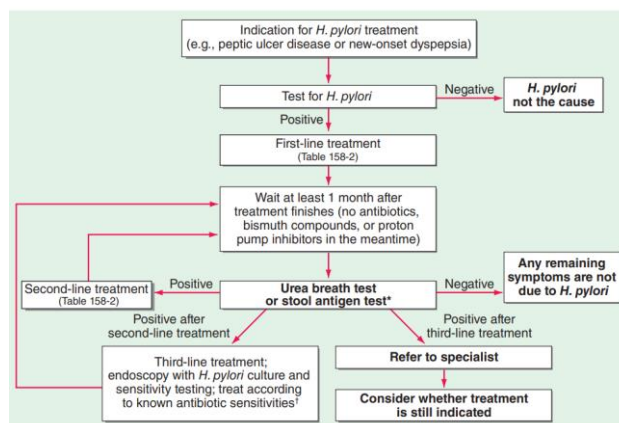
- Patients with gastroesophageal reflux disease (GERD) in the absence of other indications
- Asymptomatic individuals without risk factors.

### Treatment<sup>[72]</sup>

**Table 6: Treatment of *H. pylori*.**

Regimen (Duration)	Drug1	Drug2	Drug3	Drug4
Regimen 1: OCM (14days)	Omeprazole (20mg bid)	Clarithromycin (500mg bid)	Metronidazole (500mg)	-
Regimen 2: OCA (14days)	Omeprazole (20mg bid)	Clarithromycin (500mg bid)	Amoxicillin (1g bid)	-
Regimen 3: OBTM (14days)	Omeprazole (20mg bid)	Bismuth subsalicylate (2 tabs qid)	Tetracycline HCL (500mg qid)	Metronidazole (500mg)
Regimen 4: concomitant (14days)	Omeprazole (20mg bid)	Amoxicillin (1g bid)	Clarithromycin (500mg bid)	Tinidazole (500mg bid)
Regimen 5: OAL (10 days)	Omeprazole 20mg (bid)	Amoxicillin (1g bid)	Levofloxacin (500mg)	-

### Indication of *H. pylori* treatment<sup>[73]</sup>



### Common Adverse Effects of *H. pylori* Eradication Therapy<sup>[72]</sup>

Treatment of *Helicobacter pylori* is generally well tolerated, though several side effects are frequently reported

- Diarrhea (approximately 30–50%)
- Flushing and vomiting with alcohol intake, particularly with Metronidazole
- Nausea and vomiting
- Abdominal cramps
- Headache
- Cutaneous reactions, such as rashes

### Common Symptoms and Signs of *H. pylori* Gastritis<sup>[74]</sup>

1. Heartburn and Regurgitation
2. Dyspepsia
3. Nausea and Vomiting
4. Anorexia
5. Gas and Bloating
6. Constipation
7. Epigastric Pain
8. Abdominal Heaviness
9. Fatigue.

## 6. CONCLUSION

This study demonstrates a clear conceptual correlation between *Sleshmaja Krimi Roga* described in Ayurveda and *Helicobacter pylori* infection in modern medicine. Both systems recognize a multifactorial pathogenesis involving host susceptibility, environmental factors, and progressive mucosal involvement leading to gastrointestinal disease. Ayurvedic principles such as *Agnimandya*, *Ama* formation, and *Kapha* predominance show meaningful parallels with the mechanisms of bacterial colonization, inflammation, and tissue damage described in contemporary science. Although differences exist in diagnostic and therapeutic approaches, both emphasize elimination of the causative factor and restoration of physiological balance. The findings highlight the potential value of integrating traditional Ayurvedic insights with modern biomedical understanding to enhance the management of *H. pylori*-related disorders. Further research with standardized methodologies is required to validate these correlations and explore evidence-based integrative treatment strategies.

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