

Post-Cholecystectomy Syndrome and Its Correlation with Helicobacter pylori along with Endoscopic Findings in a Tertiary Care Centre

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Article History

Received: 16.07.2025

Revised: 31.07.2025

Accepted: 16.08.2025

Published: 05.11.2025

Abstract: *Background:* Post-cholecystectomy syndrome (PCS) includes persistent or new symptoms after cholecystectomy. Helicobacter pylori (H. pylori) infection has been implicated as a contributing factor. This study aimed to assess the correlation of H. pylori infection with abnormal endoscopic findings among PCS patients. In H. pylori-negative patients with normal endoscopy, functional biliary disorders such as SOD may be considered. *Methods:* A prospective observational study was conducted in 200 patients presenting with PCS. All underwent upper gastrointestinal endoscopy and H. pylori testing preoperatively. Demographic, clinical, and endoscopic data were collected and analyzed. Postoperatively hp kit given to H. pylori positive patients and follow up was done. *Results:* The majority of patients were between 18–40 years (48%), and females predominated (72.4%). Endoscopy revealed antral gastritis in 51.0%, erosive gastritis in 12.2%, and mild antral gastritis in 18.4%. Among 150 H. pylori-positive patients, 145 (72.5%) had abnormal endoscopic findings. This demonstrated a strong association between H. pylori positivity and PCS symptoms. In H. pylori-negative patients with normal endoscopy, functional biliary disorders such as SOD may be considered. *Conclusion:* H. pylori infection significantly contributes to abnormal endoscopic findings in PCS patients. Routine testing and eradication therapy may improve clinical outcomes.

Keywords: Post-cholecystectomy syndrome, Helicobacter pylori, Endoscopy, Dyspepsia, Gastritis.

INTRODUCTION

Cholecystectomy is widely performed for symptomatic gallstone disease. However, a subset of patients continue to experience upper abdominal pain, dyspepsia, and related symptoms-collectively termed post-cholecystectomy syndrome (PCS). The etiologies of PCS include biliary and extra-biliary causes, with Helicobacter pylori (H. pylori) infection emerging as an important factor. This study was undertaken to determine the correlation of H. pylori with PCS and to evaluate endoscopic findings in a tertiary care centre setting.

MATERIAL AND METHODS

This prospective observational study included 200 consecutive patients presenting with PCS at a tertiary care centre. Patients older than 18 years with persistent or recurrent upper abdominal symptoms with Cholelithiasis were included. Patients with previous gastric surgery, severe systemic illness, or malignancy were excluded. All patients underwent upper gastrointestinal endoscopy, and H. pylori testing was RUT Kit before Cholecystectomy. Data collected included age, gender, clinical features, endoscopic findings, and H. pylori status. Statistical analysis was performed using descriptive and correlation tests. Postoperatively, patients with H. pylori-positive status were given the “HP Kit”. Follow-up of all the patients was done at 3 weeks, 6 weeks, 3 months, and 6 months.

RESULTS AND OBSERVATIONS:

A total of 200 patients were included in the study.

Demographic profile

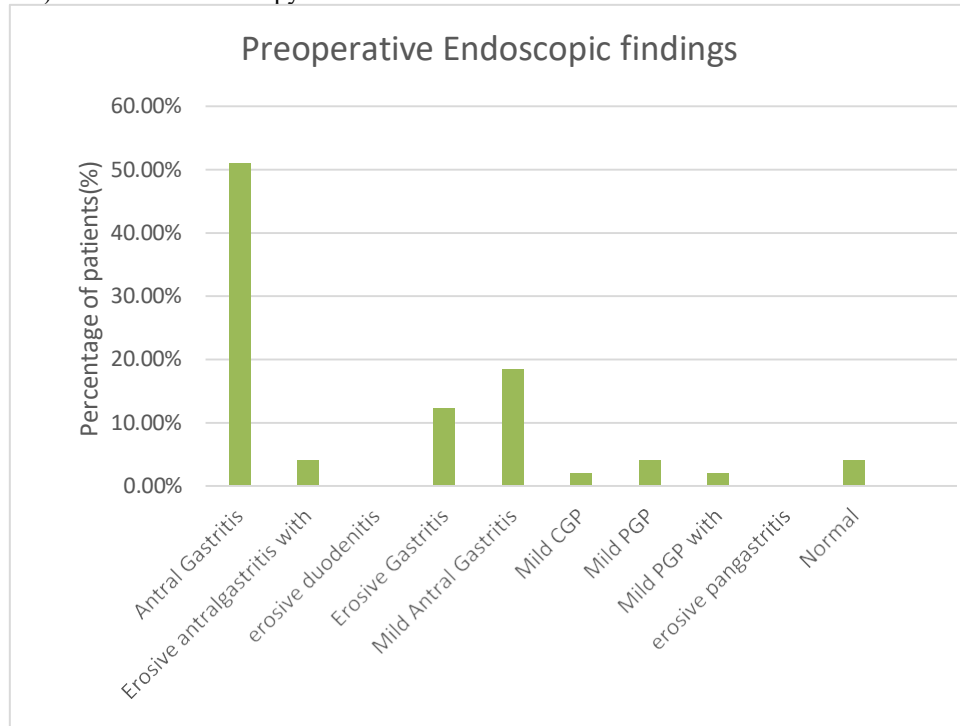
The mean age of the study population was 42.88 ± 13.12 years. Nearly half of the patients (48%) were between 18–40 years, followed by 41–60 years (43.3%), while only 8.7% were above 60 years. Females predominated (72.4%) compared to males (27.6%).

Comorbidities

One or more comorbidities were present in 39.4% of patients. Hypertension was most frequent (52%), followed by diabetes (30%), hypothyroidism (18%), and cardiovascular disease (6%). The majority (60.6%) had no comorbid conditions.

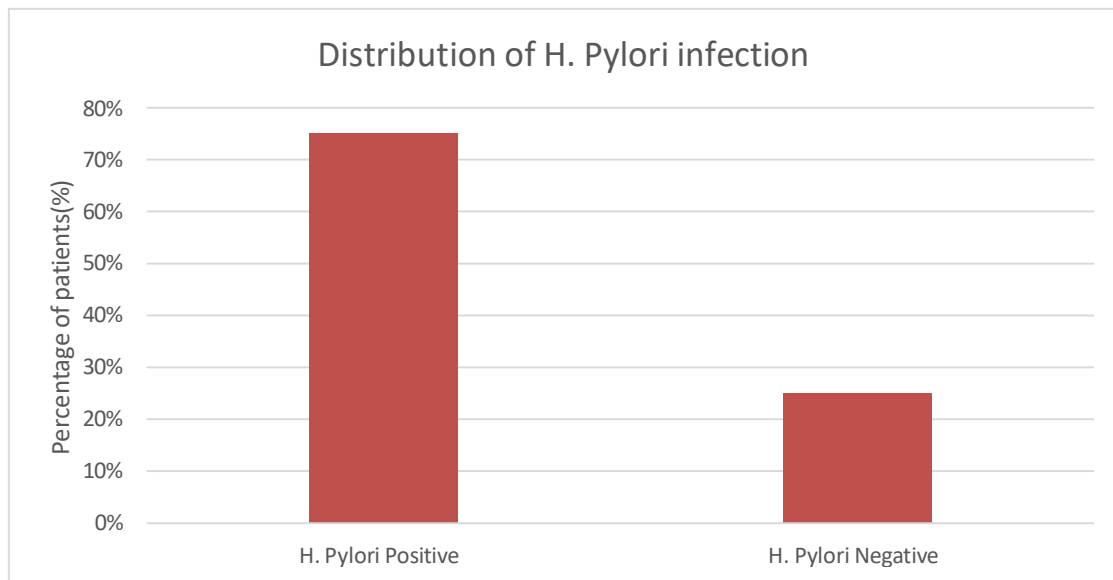
Endoscopic findings

Abnormal endoscopic findings were observed in the majority of patients. **Antral gastritis** was most common (**51.02%**), followed by **mild antral gastritis (18.37%)** and **erosive gastritis (12.24%)**. Less frequent findings included **erosive duodenitis (4.08%)**, **mild PGP (4.08%)**, **mild CGP (2.04%)**, and **PGP with erosive pangastritis (2.04%)**. A small proportion (**4.08%**) had normal endoscopy.



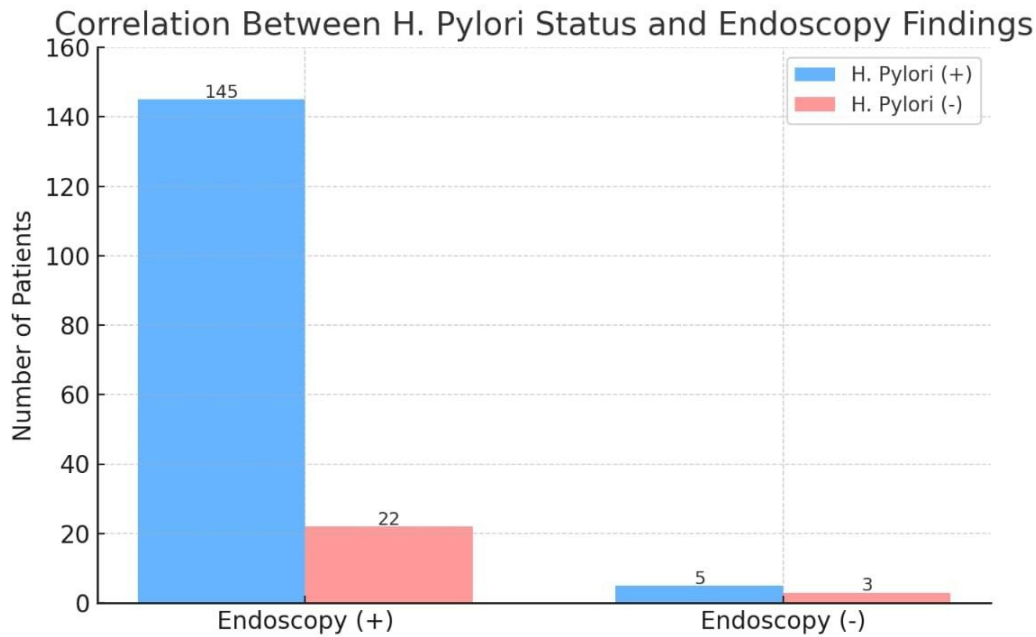
Helicobacter pylori infection

H. pylori was detected in **75%** of patients, while **25%** were negative. Among *H. pylori*-positive cases, **96.7%** showed abnormal endoscopy findings, highlighting a strong correlation between infection and mucosal pathology.



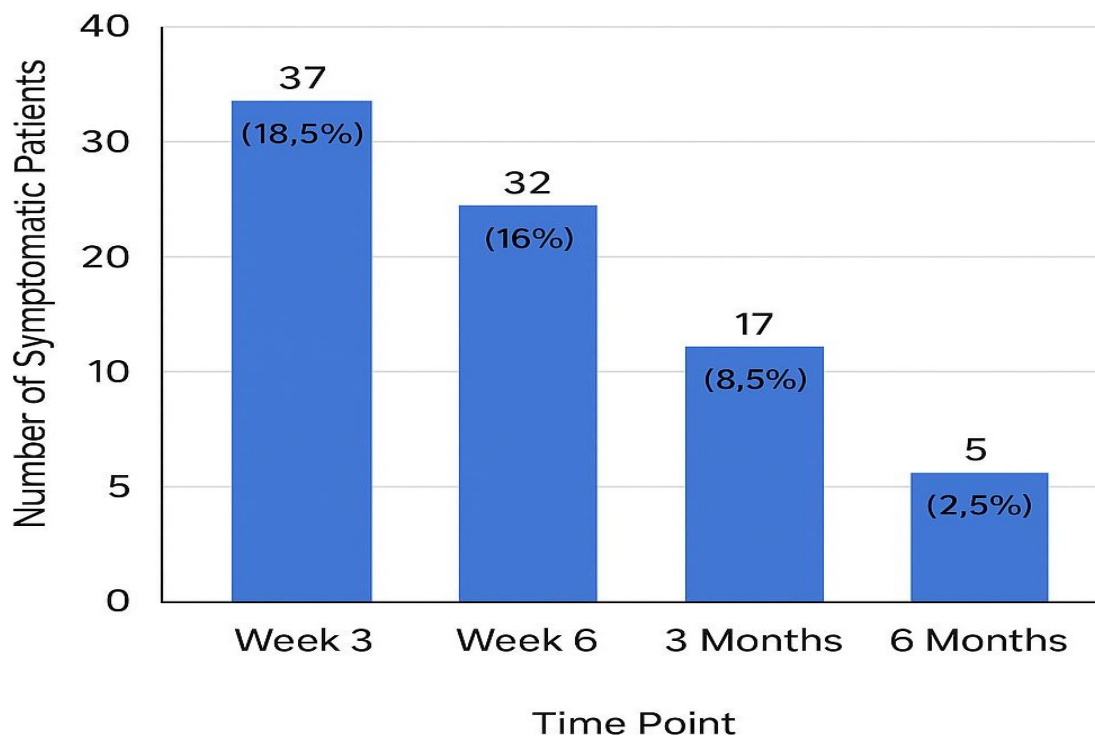
Correlation of Endoscopy Findings and H. pylori Infection

A strong correlation was observed between *H. pylori* infection and endoscopic abnormalities. Among **H. pylori-positive patients (n=150)**, **96.7%** had abnormal endoscopy, compared with **44%** in the **H. pylori-negative group (n=50)**. **1.5%** patients who had normal endoscopic findings were found to have no *H. pylori* infection.



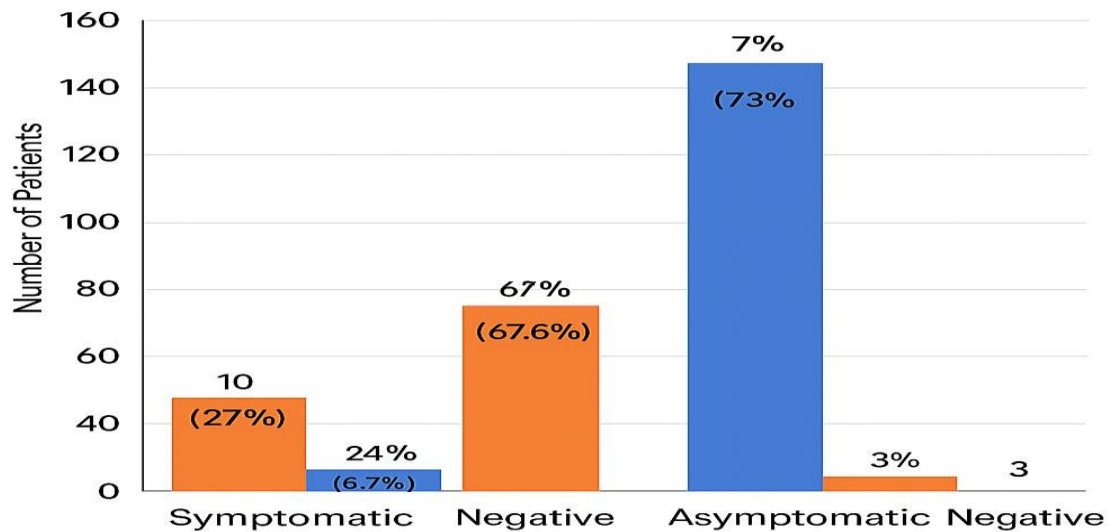
Follow-up and symptom resolution

At 3 weeks, **18.5%** of patients reported persistent post-cholecystectomy symptoms (PCS). This progressively declined to **16%** at 6 weeks, **8.5%** at 3 months, and only **2.5%** at 6 months were symptomatic. Symptoms such as pain, nausea, flatulence, and bloating showed significant improvement over time, with pain and nausea resolving completely by 6 months ($p < 0.01$). Dyspepsia and bloating improved more gradually.



H. pylori and symptoms correlation
Among symptomatic patients, **67.6%** were H. pylori-positive with abnormal endoscopy, while very few symptomatic patients were H. pylori-negative with normal endoscopy, confirming a strong association between infection and persistent PCS.

Preoperative *H. pylori* Infection and Clinical Symptoms in 200 Patients



Sphincter of Oddi Dysfunction (SOD)

Three patients with PCS despite normal endoscopy and negative *H. pylori* were diagnosed clinically as probable SOD. All had intermittent right upper quadrant pain and bloating, with mild CBD dilatation on ultrasound but normal labs and endoscopy.

DISCUSSION

The study highlights a significant correlation between *H. pylori* infection and abnormal endoscopic findings in PCS patients. Antral gastritis was the predominant lesion, followed by erosive gastritis, and was strongly associated with *H. pylori* positivity. These findings support earlier literature suggesting *H. pylori* as a potential contributor to persistent dyspepsia after cholecystectomy. The female predominance in our study reflects the higher prevalence of gallstone disease in women. Routine endoscopic evaluation and *H. pylori* testing in PCS patients may thus provide better diagnostic and therapeutic outcomes.

CONCLUSION

H. pylori infection was highly prevalent (75%) among post-cholecystectomy syndrome (PCS) patients. Abnormal endoscopy findings were strongly correlated with *H. pylori* positivity (72.5%, predominantly antral gastritis). Eradication therapy led to progressive symptom relief, with marked improvement by 6 months. A minority of patients (3 cases) had PCS due to sphincter of Oddi dysfunction despite negative *H. pylori* and normal endoscopy. Findings highlight the multifactorial aetiology of PCS and the importance of targeted evaluation.

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