

EVALUATION OF PRECURSOR GASTRIC LESIONS AND *HELICOBACTER PYLORI* INFECTION IN PATIENTS TREATED AT THE JOÃO DE BARROS BARRETO UNIVERSITY HOSPITAL

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Introduction: Gastric cancer remains one of the leading causes of cancer-related mortality worldwide, especially in regions such as Northern Brazil, where incidence and mortality rates remain high. Correa's cascade describes the gastric carcinogenesis model for Lauren's intestinal-type adenocarcinoma, involving chronic gastritis, atrophy, intestinal metaplasia (*IM*), dysplasia, and ultimately, adenocarcinoma. In this context, the identification of precursor lesions and their association with *Helicobacter pylori* infection becomes relevant for planning screening and prevention strategies.

Objectives: This study aimed to investigate the frequency of *H. pylori* infection and gastric precursor lesions in patients undergoing upper gastrointestinal endoscopy at the João de Barros Barreto University Hospital, as well as to statistically analyze progression patterns based on longitudinal follow-up. **Methods:** This is a retrospective and prospective cohort study including 4,137 unique patients who underwent 4,958 biopsy-associated endoscopic procedures between 2019 and 2024. Patients with histopathological findings of gastritis, atrophy, intestinal metaplasia, and/or dysplasia were included. Data were collected from electronic medical records and analyzed using R and Python software. **Results:** Among the evaluated patients, 845 (20.4%) presented with intestinal metaplasia, 839 (20.3%) with atrophy, 26 (0.6%) with dysplasia, and 102 (2.5%) with gastric adenocarcinoma. *H. pylori* infection was identified in 1,732 exams. Among 596 patients with sequential procedures, the average interval between biopsies was 16.2 months. A statistically significant association was found between "always detected" *H. pylori* status and progression to intestinal metaplasia ($p < 0.01$). The mean progression time was 20.1 months, being significantly longer in patients with *H. pylori* subsequently not detected. The progression rate to dysplasia was 1.9%. **Conclusion:** In conclusion, the prevalence of gastric precursor lesions was high in the studied population, with a relevant risk of progression. Persistent *H. pylori* infection was associated with lesion development. The application of OLGA and OLGIM systems

proved feasible for risk stratification, reinforcing the need for national risk-based screening guidelines.

Keywords: Gastric cancer; Intestinal metaplasia; Atrophy; Dysplasia; *Helicobacter pylori*; Screening