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BARRETT'S ESOPHAGUS: MORPHOLOGICAL AND ENDOSCOPIC CHARACTERISTICS

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Relevance. Barrett's esophagus (BE) is a condition characterized by the abnormal transformation of the normal squamous epithelium lining the distal esophagus into specialized columnar epithelium (metaplasia). This condition is strongly associated with chronic gastroesophageal reflux disease and is considered a premalignant stage with potential progression to esophageal adenocarcinoma. The incidence of BE is increasing globally, affecting approximately 1% – 2% of the general population, making its study and management highly relevant in modern gastroenterology and oncology. People with BE have an increased risk of esophageal cancer. The risk is small, even in people who have precancerous changes in their esophagus cells. It is estimated that 0.12% – 0.24% of patients with BE may develop esophageal adenocarcinoma per year. The Prague C&M Classification is a validated endoscopic grading system for BE that measures the extent of columnar metaplasia. It measures the circumferential (C) and maximum (M) length of the salmon-colored mucosa in centimeters from the gastroesophageal junction (GEJ), improving standardization in diagnosis.

Aim: the aim of the study was to evaluate demographic, clinical, and morphological characteristics of patients with BE, focusing on associated gastroesophageal conditions.

Materials and methods. A retrospective study included 30 patients with BE: 17 males (56.7%) and 13 females (43.3%), mean age 56.6 years (range 33–83 years). Endoscopic and histological data were analyzed. Biopsies were obtained from the altered areas of the esophagus above the esophagogastric junction and gastric mucosa (antrum and body) to assess intestinal metaplasia, dysplasia, inflammation, and atrophy. Histological slides were processed using the Hematoxylin and Eosin (H&E) and Gimza staining technique and evaluated under light microscopy. *Helicobacter pylori* status and associated conditions were also assessed.

Results and their discussion. Intestinal metaplasia at the esophagogastric junction was identified in 17 patients (56.7%), confirming the diagnosis of BE, while dysplasia was detected in 1 patient (3.3%), indicating a relatively low but clinically significant risk of neoplastic progression. Cardia insufficiency was observed in 18 patients (60.0%), underscoring the central role of chronic gastroesophageal reflux in the pathogenesis of BE. Chronic gastric pathology was highly prevalent (83.3%), with most (43.3%) patients demonstrating chronic atrophic gastritis involving the antrum and/or body, frequently (36.6%) accompanied by gastric intestinal metaplasia, while *Helicobacter pylori* infection was detected in 5 patients (16.7%), suggesting a variable contribution to mucosal inflammation and metaplastic transformation.

Endoscopic evaluation revealed variability in the extent of BE according to Prague classification (e.g., C1M3, C5M6, C5M7), reflecting heterogeneity in disease severity, with additional findings such as reflux esophagitis and hiatal hernia contributing to ongoing epithelial injury. A subset of patients (40%) exhibited significant comorbid conditions, including liver cirrhosis, portal gastropathy, and esophageal varices, which may exacerbate mucosal damage and complicate clinical management.

Conclusions. The study demonstrates that Barrett's esophagus is strongly associated with chronic gastroesophageal reflux and frequently coexists with gastric pathology, showing a relatively low but clinically significant risk of dysplasia and progression to malignancy. Early diagnosis and effective treatment strategies in BE are crucial to prevent malignant transformation and improve patient outcomes.