

Advances in therapeutic endoscopy

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The therapeutic endoscopy has evolved in an impressive way in recent years, even in areas before under surgical domain. Endoscopic treatment of early cancer, for example, through the development of mucosectomy techniques (EMR – Endoscopic Mucosal Resection) and the most elaborate and effective submucosal dissection (ESD – Endoscopic submucosal resection) that can resect larger areas, are techniques used in the esophagus, stomach, duodenum and colon.

Still in oncology, the palliation of advanced tumors by means of prostheses is a reality of the day to day of endoscopy and the addition of the therapeutic endosonography allowed advances until previously difficult to imagine, such as deriving the bile ducts in a transluminal way through the stomach and duodenum.

In the benign diseases of the biliary tract, the colangiopancreatic endoscopy (ERCP) has long already become indispensable and is gold standard but it does not cease to evolve. The addition of therapeutic cholangioscopy with laser lithotripsy and access by endosonography is already able to drain and exploit decisively the gallbladder.

Into the management of gastroesophageal reflux disease (GERD) after frustrated attempts in the decade of 80, the endoluminal treatment is back with radiofrequency procedures, submucosal resection at the level of gastric esophageal transition or with the manufacture of anti-reflux valves. Also, in GERD, it impresses the possibility of performing the ablation of Barrett's esophagus, even with dysplasia, by radiofrequency, mucosectomy, submucosal dissection or cryoablation.

The treatment of obesity was restricted to behavioral changes, diets, physical exercise and medications for overweight patients in mild obesity. For severe obesity the option was restricted to the bariatric surgery. Currently, bariatric endoscopy emerges as an option for patients with overweight and obesity grade II with interventions on the stomach through equipment (devices) that occupy

space such as the intragastric balloons and interventions that alter the anatomy, reducing the stomach volume through endosuture. In addition to these actions on the stomach, bariatric endoscopy advances with procedures in the small intestine intending to treat metabolic alterations such as type 2 Diabetes and NASH, with the possibility of proximal intestinal deviations, through an intestinal sleeve anchored in the duodenum or with distal intestinal deviations by means of endoscopic anastomosis through magnetic rings. There is also the possibility of remodeling the duodenal mucosa by means of endoscopic ablation. Also, in bariatric endoscopy, the endoluminal approach is practically the first option in the treatment of complications of bariatric surgeries such as stenosis and fistulas.

Thus we outline a brief summary of how the therapeutic endoscopy has advanced and how this progress is being made in solid bases of scientific evidence, thus demonstrated, as an example, in two articles published in this edition of the **Archives of Gastroenterology**.

Yamazaki et al.⁽¹⁾ evaluate through an experimental model the learning of endoscopic dissection (ESD), one of the most complex endoscopic procedures, with clear objectives and methodology demonstrating results based on depth of resection with microscopy and defining the relationship with complications and learning. Coronel et al.⁽²⁾ demonstrate through a well-structured meta-analysis of randomized prospective articles the effectiveness of endoscopic treatment of gastroesophageal reflux disease. These two articles of great scientific quality that match the standards of the **Archives of Gastroenterology** come from the excellent school of Endoscopy of the University of São Paulo that is renewed every day.

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