



The new era of interventional endoscopy

Interventional Gastroenterology is a rapidly expanding field at the cutting edge of innovation and novelty. New device technology coupled with improvements in endosonographic and high-definition imaging as well as the advent of carbon dioxide insufflation has led to a revolution in endoscopic therapy. The last decade has seen the emergence and widespread adoption of entirely new fields of endoscopy including therapeutic endoscopic ultrasound (T-EUS), third space endoscopy, and endobariatrics. In addition, new technology has allowed for major advancements in pancreaticobiliary management as well as Barretts Esophagus therapy.

Diseases of the pancreas, such as pancreatic lesions and pancreatitis, have traditionally been considered surgical diseases. However, recent trends have seen a major shift towards minimally invasive endoscopic therapies. Endoscopic drainage of pancreatic fluid collections with/without necrosectomy has become widely accepted as the superior first-line therapy. Pancreatic lesions that used to mandate surgical resection can now be successfully treated with EUS-guided radiofrequency ablation (EUS-RFA) in high-risk surgical patients. Pancreatic cysts can be better classified and risk-stratified based on new diagnostic/sampling technology available using EUS.

Similarly, many mucosal and submucosal lesions that used to mandate surgical resection can now be resected using endoscopic techniques. The advent of submucosal tunneling between the layers of the gastrointestinal (GI) tract has allowed for the emergence of per-oral endoscopic myotomy (POEM) and submucosal tunneling endoscopic resection (STER). Better closure techniques such as endoscopic suturing and over-the-scope clips have facilitated the emergence of endoscopic submucosal dissection (ESD) and endoscopic full-thickness resection (EFTR), often negating the need for more invasive therapies with high morbidity and even mortality.

The emergence of therapeutic EUS has allowed for not only avoidance of surgery in high-risk patients but also avoidance of long-term percutaneous drainage catheters which come with a high price in terms of quality of life and morbidity. The emergence of endobariatrics has filled a treatment gap for the obesity epidemic currently plaguing the world and only expected to worsen with time. Improvements in device technology have advanced the endoscopic management of pancreaticobiliary diseases such as indeterminate biliary strictures and malignant biliary obstruction as well as esophageal diseases such as Barretts Esophagus.

The new era of endoscopy is filled with innovation and advancement at an unprecedented rate and with no end in sight. Overall, it is an exciting time to be an interventional gastroenterologist!

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