



Clinical Impact of Endoscopy: Gastroenterology

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16.1 Endoscopy in Current Practice

- Over time, it became the diagnostic standard for the majority of diseases of the digestive tract as well as bile ducts [1–3]:
- The accumulated knowledge currently allows:
 - Understanding the associated etiopathogenic mechanisms of gastroenterological diseases.
 - Reorganization of digestive tract conditions.
 - The introduction of innovative noninvasive treatments.
- It has become a widely used method, being relatively easily accepted by patients, due to the following [4, 5]:
 - Permanent modernization of equipment and endoscopic accessories.
 - Continuous improvement of the team that uses them.
 - The possibility of sedation.
- It has brought several benefits in dealing with patients:
 - Implementation of screening programs with consequences directly on the reduction of morbidity and mortality.

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- Some procedures (polypectomies, use of stents in biliary and pancreatic pathology, drainage, dilations of stenoses, endoscopic hemostasis, PEGs) have radically changed their attitude toward patient management.
- Major advantages that gastroenterology has gained for the patient through endoscopy [4]:
 - Increasing periprocedural comfort.
 - Improved the quality of life of patients.
 - Reduction of mortality, complications, period of post-intervention hospitalization.
 - The existence of a favorable balance of the time cost-effectiveness.

16.2 Implications of Endoscopy in Gastroenterology

- The use of endoscopy in the pathology of the bile ducts and the pancreas which for a long time represented the prerogative of surgery [6]:
 - The introduction of endoscopic retrograde cholangio-pancreatography (ERCP) with associated techniques has improved considerably patient morbidity and mortality.
- The use of endoscopy in the field of pathological anatomy:
 - Made the transition in many cases from the analysis of evidence postsurgical intervention to those obtained by harvesting biopsies.
 - This aspect was reflected in the benefit of patient's quality of life who improved significantly.
- The discovery of *Helicobacter pylori* and the macroscopic consequences of the mucosal changes revealed by endoscopy.
- All endoscopic procedures, with a diagnostic or therapeutic role, are widely used in medical practice replacing to a large extent or even totally the old techniques of approach (plain abdominal X-ray, irrigography, enteroclysis, defecography, laparoscopy, arteriography, etc.).

16.3 Therapeutic Role and Clinical Impact

- Mechanical or thermal endoscopic hemostasis by using different techniques such as hemostatic clips, coagulation with argon plasma, bipolar probe, elastic ligatures, injection of other substances.
- Polypectomy, endoscopic submucosal dissection, as well as endoscopic mucosal resection are techniques that allow resection of preneoplastic lesions as well as T1 cancers and have intervened in decreasing the incidence of esophageal, gastric and colorectal cancer.
- Dilation or fitting of stents in case of certain pathologies which causes stenoses in the digestive tube or the biliary tract.
- Peroral endoscopic myotomy (POEM) in the treatment of motility esophageal disorders, esophageal diverticula.
- Different endoscopic suturing techniques in the treatment of obesity.
- Endoscopic drainage of pseudocysts, walled-off pancreatic necrosis (WOPN), abscesses, or even anastomoses between different organs as in endoscopic gastrojejunostomy.

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