

GI Disease: Cutting Out the Snip

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Major changes have occurred in the field of gastroenterology over the past 20 years. In the late '60s and '70s, surgery was the only way to remove polyps, stones in the common bile duct, and/or open strictures of the gastrointestinal (GI) tract. Peptic ulcer disease was believed to be due to acid hypersecretion and the only treatments available at that time were antacids and anticholinergic agents. Controlled trials showed these treatments did not cure the ulcer; in fact, they did not even heal it. Rigid and bland diets were used to treat ulcer disease without any evidence of benefit. Gastroesophageal reflux disease (GERD) was also treated with antacids and if the reflux caused ulceration, surgical repair was the only effective treatment. Medical treatment of inflammatory bowel disease was confined to two drugs, namely salazopyrin and prednisone. In most cases, surgery had to be done, resulting in multiple bowel resections or the creation of an ileostomy.

In short, about 30 years ago, effective treatment of GI disease was usually surgical. Since that time, major advances (Table 1) have made

Table 1

Major advances in gastroenterology in the last 20 years

- The demonstration that *Helicobacter pylori* is a major cause of duodenal ulceration
- The development of drugs, such as histamine receptor blockers, PPIs, budesonide, azathioprine, methotrexate, and TNF antibodies
- The development of therapeutic endoscopy
- The development of home nutritional support (especially for individuals with short bowel and obstruction)

PPI: Proton pump inhibitor
TNF: Tumour necrosis factor

it increasingly possible to treat GI problems with drugs (Table 2) or therapeutic endoscopy.

Although hepatology is a separate discipline, gastroenterologists often practise as both luminal gastroenterologists and hepatologists. It would, therefore, be important to be familiar with some of the major advances in hepatology which have also occurred during the last 20 years (Table 3).

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Table 2

The role of various drugs to treat GI diseases

Drug	Role
Histamine receptor blocker	Controls acid secretion without having to ingest huge amounts of antacids
PPI	Heals ulcerative esophagitis and successfully inhibit rebleeding of ulcers
Budesonide	Induces a remission in acute Crohn's disease without severe side-effects
Azathioprine	Provides long-term remission of Crohn's disease
Methotrexate	Provides long-term remission of Crohn's disease

GI: Gastrointestinal
PPI: Proton pump inhibitor

What have been the advances in treatment?

Drug treatment

A drug acting as a histamine receptor blocker was the first major development. These drugs are now considered so safe, they're available over-the-counter. However, histamine receptor blockers do not suppress acid sufficiently to heal esophagitis. Because of this, proton pump inhibitors (PPIs) were introduced. Initially, there was concern that PPIs could promote the development of gastric cancer, but these fears have been unfounded. The availability of PPIs has markedly reduced the need for surgical treatment of GERD. In fact, several reviews suggest that long-term use of PPIs is the best way of treating GERD.

In the field of inflammatory bowel disease, the introduction of budesonide has made it possible to induce a remission in acute Crohn's disease without the hazard of severe, systemic side-effects from prednisone. More importantly, controlled clinical trials have shown that long-term remission can be achieved with the use of immunosuppressive agents, such as azathioprine and methotrexate.

Recently, the role of tumour necrosis factor (TNF) in inflammatory bowel disease has been demonstrated and antibodies to TNF have been developed. One such antibody, which binds complement, has been shown to have dramatic effects on Crohn's disease and is probably the

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first drug to induce healing of fistulas in most patients. In addition, anti-TNF antibodies have induced remission in cases where all other treatments have failed. Again, these developments have reduced the need for surgery in Crohn's disease.

Therapeutic endoscopy

Therapeutic endoscopy has been a major advance in the non-invasive treatment of conditions which previously required surgery. Therapeutic endoscopy can be used to remove the stones in the common bile duct, to dilate malignant strictures, and to promote drainage of both bile and pancreatic ducts.

Polypectomy, and even excision of small cancers can be done through the endoscope. Zenker's diverticula can be drained without resorting to an operation and bleeding ulcers can be sealed with different types of devices or clipped to stop hemorrhage.

Nutritional support

Many GI diseases result in chronic malnutrition and inability to nourish the individual using normal food. The development of home nutritional support, using either parenteral or enteral nutrition has made it possible for individuals with short bowel or chronic bowel obstruction to live independently and pursue careers. Proper nutrition also reduces the risk of surgical complications.

Thus, there is a diminishing role for surgery as our understanding and treatment of GI diseases increases. **Dx**

Table 3

Major advances in hepatology in the last 20 years

- Recognition of hepatitis C and its characterization
- The availability of liver transplantation
- The introduction of interferon, ribavirin, and lamivudine for the treatment of viral hepatitis
- Therapeutic endoscopy, with banding and gluing of varices and transjugular intrahepatic portosystemic shunt (has allowed control of hemorrhage from portal hypertension)

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