

VIDEO CAPSULE ENDOSCOPY

Sarkis K Strak

Professor, Department of medicine, Basrah Medical College

The first rigid endoscope that allowed inspection of the upper gastrointestinal tract under a general anaesthetic was introduced by Bruening in 1907. Forty years later, the first flexible fiber optic instrument allowed procedure to be done under light sedation. A major advance occurred in 1998 when capsule endoscopy was developed in Europe and introduced into clinical practice, which enabled complete visualization of the small intestine. The U.S Food and Drug administration (FDA) approved its use in August 2001. Since then, more than 50000 capsules have been used in more than 50 countries.

Historically, the small intestine was considered technically difficult to examine because of its length, location, and tortuosity.

Esophago-gastro-duodeoscopy allows for direct inspection of the duodenum, similarly, incubating the ileocecal valve at colonoscopy or so called terminal ileoscopy can access the very distal portion of the small intestine. Evaluating the more than 20 feet of small bowel that lie beyond the reaches of these instruments has been impeded by difficult technical challenges. Yet, examination of this segment is especially important in evaluating patients with various disorders including gastrointestinal bleeding from an obscure source.

Previously the small intestine could be partly assessed by a push enteroscope, which is longer (about 2 meters) than a standard gastroscope and therefore

allows examination of up to 80-120 cm beyond the ligament of Treitz, while intraoperative enteroscopy required a general anesthetic and laparotomy where the enteroscope is manually fed though the small intestine and gradually pulled back to allow for close inspection of the mucosa.

Barium follow though and enteroclysis allow indirect examination of the small Bowel but have a low diagnosis rate¹, relatively insensitive for flat diminutive, infiltrative or inflammatory lesions.

Given the limitation of these tests, there has been a surge in investigations on the practical diagnostic ability and clinical utility of capsule endoscopy that allows for direct visualization of the entire small intestine lining^{2,3}.