
AN OVERVIEW OF GASTROINTESTINAL ENDOSCOPY

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Gastrointestinal endoscopy is probably one of the most rapidly advancing skills of modern medicine. Since the introduction of the first fiberoptic gastroscope by Hirschowitz in 1958¹ technology of these instruments and their use has allowed us to fully visualise the upper gastrointestinal tract, the colon, the terminal ileum and study accurate details of images of the pancreatic and biliary ducts.

Few physicians would argue with the fact that upper gastrointestinal endoscopy and colonoscopy compared with the routine barium studies offer tremendous advantage in accuracy of diagnosis. Errors of endoscopic diagnosis in experienced hands is less than 5% while those of barium studies are 18% to 46%^{2,3,4,5}. Furthermore, the use of endoscopy allows sampling of the lesions for histologic diagnosis by biopsy and brush cytology which further improves the accuracy of the diagnosis.

Fiberoptic endoscopy has opened the horizon for the field of therapeutic endoscopy which is replacing surgery and obviating the need for general anaesthesia in conditions like dilation of pyloric strictures, removal of foreign bodies, placement of gastrostomy tubes, management of variceal bleeding and removal of common bile duct stones by endoscopic sphincterotomy⁶.

The use of endoscopy on the other hand has been limited by four factors namely; patient comfort, risk, lack of permanent documentation and cost.

Recent studies have shown that comfort of patients is no longer a problem due to improved skills of well trained endoscopists and the use of smaller and more flexible instruments^{7,8,9}. As patients are questioned after endoscopic procedures most of them are willing to undergo the procedure again if necessary. Risk is minimal in experienced hands and estimated at one mortality per 16,262 upper endoscopies¹⁰. Most of the complications are related to over sedation in the elderly or uncooperative patients and can be avoided by careful use of sedation and exclusion of the uncooperative patient.

The third problem of lack of permanent documentation has been overcome by improved photography like the use of slides, colour prints, videotapes and more recently electronic digitalisation of endoscopic images.

The fourth problem of cost remains the major obstacle¹¹. This includes the cost of equipment and the time of a skilled physician. Several countries have overcome this problem by establishing mobile endoscopy units as in Japan or primary endoscopy units which are gaining popularity in the United States. These specialised endoscopy units allow the most efficient use of equipment and trained manpower. Hopefully more people will be trained in our part of the world to use these instruments skillfully and avoid unnecessary delay in diagnosis of gastrointestinal disorders.

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The future holds more promise for endoscopy in both the diagnostic and therapeutic fields. Research is underway in endoscopic ultrasonography where probes attached to endoscopes allow accurate ultrasonographic imaging of deep abdominal structures like the pancreas, the hepatobiliary tree and the abdominal vascular structures. Furthermore, therapeutic coagulation devices using laser and heater probes are already being evaluated in the clinical setting of tumour palliation¹² and gastrointestinal bleeding¹³.

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