

Briefly about Endoscopy

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ABSTRACT

Gastroenterology is a branch of internal medicine that deals with the diagnosis and treatment of diseases of the digestive tract. When making a diagnosis, specialists are fundamentally helped by the anamnesis, on the premise of which they build up a working determination, that is, the most likely disease that causes the recorded indications. In arrange to affirm the working determination, they as a rule utilize a arrangement of tests, from research facility and radiological to endoscopic. Endoscopy is a method utilized in medicine to look at the inside of the body. An endoscopic strategy employments an endoscope to look at the inside of a hollow organ or body cavity.

Keywords: Endoscopy, Internal Medicine, Gastroenterology, VCE, Health.

INTRODUCTION

Endoscopy may give a test that will be inspected histologically or refined in the clinical laboratory to detect an infectious agent [1]. A few endoscopic strategies are done utilizing radiographic direction. Another way of classifying tests is by the therapeutic claim to fame mindful for giving them. Clinical research facility medicine, a division of pathology, is capable for the wide extend of clinical research facility tests. Anatomic pathology gives tissue and cell-based investigation and the post-mortem examination benefit. Radiology is mindful for basically all image-based methods but moreover gives a number of restorative strategies. Endoscopy covers a wide run of methods that may be performed by particular therapeutic masters (gastroenterologists perform colonoscopy, e.g., cardiologists are mindful for a number of intravascular strategies such as putting stents to open blocked blood vessels providing the heart). Other endoscopic strategies are performed by the surgical specialties.

Endoscopy has been a portion of therapeutic examinations for well over 100 years, and the move to 'open access' to these administrations implies that frameworks that permit fast examination and return domestic are seen as the most effective [2]. The majority of these examinations are awkward, and a few are amazingly agonizing. Sedation is as often as possible given by the endoscopist as sole administrator/ seditionist with clear concerns unless full observing is utilized. There has been an increment in the utilize of combinations of specialists slowly supplanting the single specialist, frequently midazolam, with more brief- acting and strong drugs. Particularly in the elderly, the utilize of such combinations ought to be constrained to anaesthetists.

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In expansion, there has been an increment in the complexity of methods being performed. Numerous centres will give an endoscopic resection of colonic tumors, retrograde cannulation of pancreatic conduits for stenting or stones, and stenting of hindering bronchogenic carcinoma. The complications that may emerge from these methods are more than a moderate recuperation from the sedation and may require crisis surgery. Get to to such protect ought to be concurred some time recently such strategies are started.

Examination

It is basic that an endoscopic examination of the oesophagus, stomach and duodenum is carried out as rapidly as conceivable beneath seriously care conditions with observing and pulsoximetry [3]. The term “emergency endoscopy” is in truth deceiving since upper gastrointestinal dying continuously constitutes an crisis and calls for prompt hospitalization and fast symptomatic clarification.

The essential destinations of beginning endoscopy are: (1.) exact recognizable proof of the area of the bleeding, (2.) assessment of the bleeding movement, (3.) evaluation of the threat of repetitive dying, and (4.) collection of coexisting discoveries. Endoscopy is 90-95% solid in clarifying these questions (in the event that fundamental, rehashed inside a period of 12 to 24 hours). The auxiliary objective is to choose on the helpful results, such as traditionalist and/or nearby treatment, or surgical intercession. To this end, the utilize of endoscopy with the plausibility of synchronous treatment is the strategy of choice, for which there is no reasonable alternative.

The grounds for the essential utilize of endoscopy to clarify upper (and lower) gastrointestinal bleeding are: (1.) endoscopy is recognized as the method which uncovers the most conclusive data; (2.) this demonstrative strategy moreover gives the opportunity of utilizing different endoscopic methods to impact local haemostasis; (3.) endoscopic methods are more likely to be promptly accessible than scintigraphy or particular angiography; (4.) endoscopy is altogether more prudent in terms of time and fetched than scintigraphy or arteriography; (5.) endoscopy is less upsetting for the quiet and less obtrusive than angiography.

Complications cannot be ascribed to endoscopy itself, but to the pre-existing conditions: localized holes, dangers related with yearning, cardiac issues, brought down blood weight, etc. Premedication may subsequently be unseemly in person cases, and endotracheal intubation or endotracheal anesthesia is at that point indicated.

Endoscopist

Skilled endoscopists can presently reach each portion of the stomach related tract and its members, such as the biliary tree and pancreas [4]. It is conceivable to take examples from

all of these regions, and to treat numerous of their sufferings, so patients have profited incredibly from endoscopy. Shockingly, be that as it may, in a few cases the method may not be supportive, and can indeed result in extreme antagonistic occasions. There are moreover a few dangers for the staff. The objective must be to maximize the benefits and minimize the dangers. We require competent endoscopists, performing strategies for appropriate signs on patients who are completely taught and arranged, with talented assistants, and utilizing ideal gear. The fundamental standards are comparable for all ranges of gastrointestinal endoscopy, recognizing that there are particular circumstances where the dangers are more prominent, counting restorative and crisis procedures.

Endoscopy is regularly portion of a comprehensive assessment by a gastroenterologist or other digestive master. It is for the most part utilized electively in the hone environment or clinic outpatient clinic, but in some cases may be required in any portion of a healthcare office (e.g. crisis room, seriously care unit, working room). Some of the time endoscopists offer an “open access” benefit, where the beginning clinical appraisal and proceeding care are performed by another doctor. In all of these circumstances it is the obligation of the endoscopist to guarantee that the potential benefits surpass the potential dangers, and to actually perform the fundamental assessments to make fitting suggestions for the patient.

Findings

Rejection of the intestinal unite is a common complication [5]. Intense dismissal is most common in the to begin with 3–9 months and more predominant when the visceral organ does not incorporate the liver. At this time, there is no precise serum test to decide work or foresee dismissal. Hence, visit biopsies are performed. Pressing endoscopy is required for indications such as expanded stool yield, fevers, sickness, spewing, low albumin, and raised c-reactive protein. The endoscopy discoveries of intense dismissal incorporate brief and blunted villi, edematous and friable mucosa, and ulcers. Other than the clear require for PN (Parenteral Nutrition) in the occasion of serious dismissal, there are no rules to direct wholesome care for the quiet with dismissal of an intestinal join. This is an region that requires examination, particularly in respect to viability of enteral sustenance back during this occasion if a measured, such as glutamine, can be supportive for recovery of enterocytes as the dismissal is recovering.

Chronic dismissal is moreover getting to be more predominant but not as effectively distinguished or analyzed. Side effects of this are inveterate the runs, abdominal pain, and unite glitch with weight misfortune. In this case the biopsy may appear mucosal and submucosal fibrosis and decay but a full thickness biopsy is required to affirm the diagnosis.

Other potential complications that can have impact on the nourishment arrange can incorporate dumping disorder, little bowel bacterial excess, pancreatic inadequate, nourishment sensitivities, hyperammonemia and renal dysfunction.

GI Bleeding

Gastrointestinal (GI) bleeding may be enormous and intense or mysterious and incessant in nature [6]. GI bleeding comes about when aggravation of the mucosal lining comes about in disintegration through to the submucosal layer. Upper GI hemorrhage is considered to be a drain from any location proximally to the cecum, and all ulcerative bleeding is arterial with the exemption of a tear that cuts over all vessels, threatening tumors, and in patients with esophagitis.

When disintegration into an supply route happens, it as a rule produces two bleeding locales since of arterio-arterial anastomoses. When the bleeding happens at the ulcer base course, it may be a life-threatening emergency.

Bleeding may happen from the lower gastrointestinal tract as well. Causes of lower GI bleeding include hemorrhoids, diverticulosis, inflammatory bowel disease, rectal perforation, or intussusception.

Acute upper GI bleeding may result from numerous causes, such as gastritis, peptic ulcer, push, drugs, hormones, injury, head wounds, burns, and esophageal varices.

Differential determination between gastric and duodenal ulcers must be gotten. Duodenal ulcers as a rule account for around 80% of all ulcers famous and seldom gotten to be cancerous. Gastric ulcers, on the other hand, may ended up cancerous and are more likely to bleed.

Initial displaying indications of a GI drain are either hematemesis, melena, or hematochezia. An intense drain will have more than 60 cc/day of dark hesitate stool and more often than not more noteworthy than 500 cc, while mysterious bleeding is regularly 15-30 cc/day. Stools can be positive for mysterious blood up to 12 days after an intense drain. Of all GI hemorrhages, 80% more often than not halt spontaneously.

The objective of treatment is at first anticipation and treatment of stun, with liquid volume substitution. Upkeep of circulating blood volume is basic to prevent myocardial dead tissue, sepsis, and passing. Endoscopic examination is the essential symptomatic method utilized. Once the injury has been distinguished, treatment with Pitressin implantation may be utilized to control bleeding.

Once the understanding is stabilized, endoscopy ought to be the to begin with ponder [7]. In common, endoscopy ought to be performed inside 24 hours after affirmation, and beneath

these circumstances the source of bleeding can be illustrated in approximately 80% of cases. Longer delays have a lower symptomatic surrender. Two injuries are seen in almost 15% of patients. An upper gastrointestinal arrangement ought to be performed if endoscopy is dubious or inaccessible. In spite of the fact that the demonstrative data given by endoscopy does not show up to have come about in diminished blood misfortune or made strides result, endoscopic treatment, in the shape of sclerosis of varices or infusion of a bleeding ulcer, may do so. Having the conclusion will moreover offer assistance in arranging ensuing treatment, counting the surgical approach if operation gets to be necessary.

Rarely, specific angiography will have symptomatic or restorative convenience. For determination, it is most supportive when other considers fall flat to illustrate the cause of bleeding. Implantation through the angiographic catheter of vasoconstrictors (eg, vasopressin) and embolization of the bleeding vessel with Gelfoam may be able to stop the bleeding in uncommon cases.

Upper endoscopy is basically shown to see for upper gastric or esophageal danger in all patients over age 60 years with new-onset dyspepsia (in whom there is expanded danger hazard) [8]. In patients beneath age 60, the chance of harm is less than 1% so later rules suggest against schedule endoscopy for most more youthful patients—except those with conspicuous “alarm” highlights, such as dynamic weight misfortune, dynamic dysphagia, determined heaving, prove of dying or press lack frailty, discernable stomach mass, or a family history of upper GI cancer. For patients born in districts in which there is a higher frequency of gastric cancer, such as Central or South America, China and Southeast Asia, or Africa, an age limit of 45 years may be more appropriate.

Endoscopy may also be warranted when side effects come up short to react to beginning empiric administration or when visit indication backslide happens after suspension of empiric therapy.

CT has an vital part to distinguish the source of intense GI dying where an upper GI endoscopy has fizzled to distinguish the source [9]. Unmistakable indicates unmistakable bleeding (more often than not melaena or hematochezia in proximal or distal little bowel dying, separately), though darken bleeding depicts a bleeding source which is undetected after past full appraisal of the GI framework with upper and lower GI endoscopy and little bowel. The part of CT is to detect the source of discharge and coordinate administration to capture bleeding utilizing endovascular or endoscopic interventional therapies.

Upper GI bleeding is as a rule avoided by negative endoscopy to the moment portion of duodenum. Bleeding in the distal

duodenum and rest of the little bowel makes up a minority of cases (around 10%). Video capsule endoscopy and twofold balloon enteroscopy both have a higher surrender than CT for discovery of the source of bleeding and ought to be the to begin with line examination, with CT saved for unsteady patients where there is dynamic haemorrhage.

VCE

- Obscure (overt or occult) gastrointestinal bleeding portrays bleeding that continues or repeats after endoscopic assessment of the upper and lower gastrointestinal tract comes up short to recognize a cause
- VCE (Video Capsule Endoscopy) is suggested as the to begin with- line examination and ought to in a perfect world be performed inside 4 days of bleeding

Obscure gastrointestinal bleeding accounts for 5% of all cases of gastrointestinal bleeding [10].

Commonly emerging from the little digestive tract, aetiologies incorporate angiodysplasia, NSAID-related enteropathy, little bowel tumors, and Crohn's infection. Little bowel vascular injuries are the most common aetiology in unmistakable dying. VCE is prescribed as the to begin with-line examination for little bowel examination in patients with cloud dying. It has a demonstrative abdicate of up to 60% in this quiet bunch and is less intrusive than twofold balloon enteroscopy.

A standard capsule measures 26 × 11 mm and transmits pictures through radiofrequency to a recording gadget worn by the patient. Unless bowel hindrance is clinically suspected, cross-sectional imaging or a patency capsule check is not required. The demonstrative abdicate is most elevated if the procedure is performed inside 14 days of a dying scene. A typical VCE is a great negative indicator for re-bleeding and require for assist blood transfusions.

Enteroscopy

While upper gastrointestinal endoscopy can reach the proximal little digestive tract in most patients, enteroscopy is an endoscopic strategy that permits more broad assessment of the little intestine, amplifying into the jejunum and/or ileum [11]. Thrust enteroscopy employments a long endoscope to look at up to the proximal jejunum. More profound assessment of the little bowel can be surveyed by utilizing a method called twofold swell enteroscopy, which employments a long endoscope with a adaptable overtube. Successive and rehashed expansion and flattening of inflatables on the tip of the overtube and enteroscope permit the administrator to thrust and drag along the whole length of the little digestive tract to the terminal ileum, to analyze or treat small bowel lesions identified by capsule endoscopy or

other imaging modalities. This procedure can be performed by means of an antegrade approach (through the mouth) or retrograde approach (by means of the butt), subordinate upon the location of the lesion.

Patient

Patients are entitled to be completely educated of the reasons why a method is suggested, the procedure's anticipated benefits and the potential dangers, as well as the potential hurts of doing without the method, any impediments of the proposed strategy, and any options [4]. They moreover require to know precisely what will happen during the strategy, counting any demonstrative or restorative mediations that may sensibly be expected to happen, and have the chance to inquire questions. A discourse with respect to the potential require for intubation, hospitalization and blood transfusion is vital and the patient's inclination ought to be recorded. Also, off-label methods and gadgets ought to be talked about as portion of the educated assent process.

The ASGE (American Society for Gastrointestinal Endoscopy) as of late suggested that educated assent may be gotten by any part of the GI (gastrointestinal) group (including nurse, advanced practice provider, or trainee) who is completely learned of and able to communicate the indication(s), dangers, benefits, and choices of that strategy. It is clearly the particular endoscopist's obligation to guarantee that the prepare is concluded appropriately.

Sedation

Sedation and other medications are given by the endoscopist or by the endoscopy nurse beneath supervision [4]. The nurse is the down to earth gatekeeper of the patient's security and consolation amid endoscopic methods. Nursing observation ought to be supplemented with observing gadgets, at slightest for heart rate, blood weight, and oxygen immersion. Supplemental oxygen is utilized routinely in numerous units, in spite of the fact that a few contend that this may cover hypoventilation, which is superior recognized by observing of carbon dioxide (capnography). Ventilatory movement and the level of awareness and distress ought to moreover be outwardly surveyed. Electrocardiographic checking is by and large prescribed for drawn out methods and patients at tall hazard, counting the elderly and patients with critical cardiovascular or pneumonic infection or a history of dysrhythmias. The nurse ought to archive this handle carefully, along with the patient's crucial signs, checking information, and the patient's reaction. Crisis drugs and gear must be accessible adjacent, and the endoscopist ought to be prepared in revival and life support.

Pregnancy

Although endoscopy is schedule in the assessment of numerous gastrointestinal disorders, it is ordinarily as it were performed when completely required in pregnancy due to the hazard to the hatchling of narcotic solutions, especially in the to begin with trimester, and specialized complexity during the third trimester [12]. The dangers of narcotic drugs incorporate overdosage, unfavorably susceptible response, teratogenesis, and hemodynamic precariousness of the mother driving to hypoxia and hypotension of the fetus.

In common, maternal hypotension ought to be dodged as much as conceivable; patients with gastrointestinal bleeding ought to be revived with pressed erythrocytes and liquid as required some time recently the strategy. Antihypertensives earlier to the strategy and colonic overdistention during the method ought to be dodged. Patients ought to not be set or moved to the prostrate position (since the gravid uterus compresses the vena cava and can lead to hypotension), and narcotic solutions ought to be utilized reasonably but sparingly. If hypotension happens during the method, intravenous liquids ought to be utilized and the patient's position ought to be changed to deplete blood from the lower limits to the crucial organs. Thought ought to be given to ending the strategy. Untimely uterine compressions during endoscopy may require tocolytics such as magnesium sulfate or terbutaline. Interview with an obstetrician is critical, and anesthesiologic help with the strategy ought to continuously be considered, especially in the to begin with trimester, during a high-risk pregnancy, in the nearness of maternal or fetal insecurity, or for a delayed strategy such as ERCP (endoscopic retrograde cholangiopancreatography).

Recovery

After the endoscope is evacuated, the helping nurture checks on the status of the understanding and at that point exchanges care to the recuperation region staff [4]. Checking is proceeded until the understanding is completely wakeful, more often than not 20–30 minutes after standard sedation. A longer period of perception may be essential after profound sedation or full common anesthesia. Noteworthy understanding complaints in the recuperation range must be passed on to the endoscopist with documentation of any assessment or arranged reaction to guarantee that an unfavorable occasion has not occurred.

The quiet will appreciate a drink after sedation once any pharyngeal anesthesia has worn off. When built up release criteria have been met, the persistent gets dressed and the endoscopic discoveries and follow-up arrange are examined. Endoscopy is not total until the understanding has been

counseled around the discoveries, their suggestions, and coming about plans, as well as plans for conveying the pathology comes about. This is a key opportunity for communication with the understanding to guarantee that legitimate follow-up ensues; consideration of a composed list of discoveries in the release materials or a duplicate of the completed strategy note may encourage this prepare. If sedation has been given, it is fundamental that this handle takes put in the nearness of an going with individual, since of the potential for critical postponed amnesia. In expansion, the understanding ought to be educating to have a capable individual to escort them domestic. They ought to not be permitted to drive, make critical medicolegal choices, or work overwhelming machinery.

CONCLUSION

Endoscopy implies looking inside. This word alludes to all examinations during which a extraordinarily outlined camera with a light is embedded into the human body through common openings in arrange to look at the interior of different organs. Gastroenterology frequently performs gastroscopy to look at the esophagus, stomach, and duodenum, and colonoscopy to look at the huge digestive tract. Now and then, ileoscopy is also performed, an examination of the final 10-20 cm of the small intestine. Endoscopies moreover incorporate enteroscopy, an examination of the upper portion of the small intestine behind the duodenum, or jejunum, the upper portion of the ileum. Gastroscopy and colonoscopy are among the fundamental symptomatic strategies, whereas ileoscopy is performed less habitually and as it were for particular, uncommon illnesses of the small intestine. Endoscopic examinations are frequently related with discomfort and pain, which is why numerous patients dodge going to the specialist indeed in spite of the fact that they have genuine and indeed stressing symptoms.

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CONFLICTS OF INTEREST

The Author declares that there are no conflicts of interest.

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