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Position Paper

Position Paper by Society of Gastrointestinal Endoscopy of India
Endoscopy training: Indian perspective

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and
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Introduction

Importance of Gastrointestinal (g.i.) Endoscopy in Gastroenterology practice, both for routine day to day care as well as for advanced and sophisticated management, cannot be over–emphasized. It is expected that anybody practicing gastroenterology and hepatology today, should be well versed with both diagnostic and therapeutic g.i. endoscopy. Important component of adequate endoscopy training however, goes much beyond performing and completing an endoscopy. A comprehensive training should include:

- Ability to recommend or choose an endoscopic option considering indication, contraindications, as well as other alternative nonendoscopic options (such as radiology, surgery, etc.)
- Carrying out safe and complete endoscopic procedure in a reasonable time
- Proper assessment of endoscopic findings and evaluation in the context of other available information and investigations
- Ability to prevent, recognize and manage complications arising out of endoscopic procedures
- Understand safe and effective sedation and need for monitoring during and after the procedure
- Ability to know one's limitation and threshold for stopping a procedure at appropriate time.

However, there are many issues that concern us in present day Indian scenario:

- Inconsistent and nonuniform training of trainees during their postgraduate courses that is, DM or DNB in Gastroenterology. There is no clear guideline from authority about aim of endoscopy training, methods adopted for such training as well type and number of procedures expected from the trainees (supervised and independent) during their training period
- There are short, unstructured courses available to nongastroenterologists at private hospitals as well as teaching institutes (government as well as nongovernment). This results in improper and inadequate training to these physicians. In addition, there are endoscopist who have learned endoscopy by just observing some procedures at endoscopy centers or during an endoscopy workshop
- There is a poor ratio of trained or so called "trained endoscopist" vis a vis population at large. This is particularly true for some states of India and is more true for smaller cites and rural areas.

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Role of Society

Society of Gastrointestinal Endoscopy of India (SGEI) is a professional organization of Indian G.I. Endoscopists with an aim to propagate, standardize and educate GI Endoscopy. SGEI therefore, considers it to be its duty to address this complex issue in the form of a position paper. This would initiate debate on this burning subject and in due course of time, society will be in a position to issue guidelines.

Levels of Training

We feel, there can be three levels of endoscopy training, which could be imparted to Indian physicians:

- Level 1 or Primary level: Limited to upper GI (UGI) endoscopy, sigmoidoscopy and a few simple interventions such as biopsies, injection hemostasis or band ligation
- Level 2 or Basic level: Including UGI endoscopy, lower G1 (LGI) endoscopy, capsule endoscopy and basic Endoscopic retrograde cholangiopancreatography (ERCP) with some therapeutic procedures but excluding endoscopic mucosal resection (EMR), endoscopic submucosal dissection (ESD), endoscopic ultrasound (EUS) and complex ERCP

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therapeutic procedures

- Level 3 or Advanced level: Including advanced technique related to ERCP (such as drainage of walled-off pancreatic necrosis, minor papilla cannulation, cholangioscopy, hilar tumor management), EUS (including fine needle aspiration cytology [FNAC] and fluid aspirations), balloon assisted enteroscopy (diagnostic and therapeutic), EMR and ESD.

Level 1

Who?

This could be imparted to any skilled physician with interest in learning endoscopy. We feel a post graduate physician or surgeon (MD/MS or DNB in medicine or surgery) will be best suited for such training.

Where?

Training must be in a structured fashion and for a minimum of 6 months. This could be at teaching institute or in private SGEI accredited hospitals with availability of qualified, experienced, interested endoscopists and equipment for teaching.

How?

Since, the period of training will be short and trainees may not have observed many procedures, availability of training models (plastic or digital) will be a pre-requisite to ensure such training for safety of patients. Training should include lectures on equipment, techniques, and normal as well abnormal endoscopic findings together with close observation and access to videos and atlases. A brief understanding of disinfection of endoscope and accessories is also mandatory and the same should be practiced at least 10 times under supervision. Table 1 gives the list of minimum number of procedures, which a trainee must perform before he/she is assessed for competency for level 1.

Evaluation?

A logbook must be maintained during training and mentor should certify the competency at end of training. Number of procedures performed for learning should include procedures performed unassisted but under supervision. Log book should, however, mention all procedures performed inclusive of assisted procedures as well as unsuccessful procedures. Indication, time taken and complications (if any) should also be recorded. Upper GI Endoscopy could be assessed for esophageal intubation, pyloric intubation, D2 entry, and retroflexion. Level 1 trained people should be clearly warned about consequences of overstepping their limits of performing endoscopy. Certificate provided by the supervisor or mentor should clearly state the procedures that the trainee has been trained and has acquired competency in. It is also recommended that trainee subsequently attends workshops and courses to continuously update their skills and knowledge.

Table:1 Minimum no. of procedures for competence assessment for level 1

Procedure	Number of observation	Number of procedure performed
Upper GI endoscopy	600	50
Sigmoidoscopy	300	25
Injection hemostasis	25	5
Variceal ligation	40	20
Stricture dilatation	25	7
Endoscopic biopsy	100	25

GI=Gastrointestinal

Level 2

Who?

This should be imparted primarily to students enrolling themselves for DM and DNB in Gastroenterology as well as MCh/DNB in GI surgery. Alternatively a 2 year fellowship can be started at accredited institutes with proper infrastructure.

Where?

Training should be at centers licensed by Medical Council of India to impart DM (Gastroenterology) or MCh (Surgical Gastroenterology) or by National Board of Examinations to impart DNB in Medical or Surgical Gastroenterology. In addition, reputed private set ups accredited by SGEI for the purpose can train for a 2 year fellowship. All these centers should have infrastructure and faculty with availability of radiology, pathology and lab services. It is mandatory that centers should have both elective and emergency services as well as intensive therapeutic units.

How?

Training should again be very structured with well set out goals and methodology. Physicians should not only be trained about techniques of endoscopy but also judicious use of technology and management of complications. Physicians at the end of training should be able to use the endoscopic procedures at its appropriate place in the algorithm for diagnosis and treatment of various g.i. diseases. While models, simulators, and video library could form initial part of their training; close observation and discussion with faculty followed by hands-on training-under supervision will be main learning process. It will also be essential for them to learn maintenance as well as disinfection and reprocessing of endoscopes and accessories. At least 20 sessions of endoscopy cleaning should be performed under supervision of expert endoscopist or technician, and this should be recorded in log book. Sedation (including propofol) and monitoring during procedures should also be a part of their syllabus. Log book as mentioned above should be maintained. Log book should also include complications resulting from endoscopy. Table 2 gives the list of minimum number of procedures, which a trainee must perform before he/she is assessed for competency for level 2.

While the number mentioned is based on some guidelines issued by various societies, it is somewhat arbitrary.

Evaluation?

We feel present systems at most institutes and universities do not allow proper evaluation of trainees at the end of the course. Besides a periodic assessment by faculty of the institute, there should be a critical assessment of logbook. Most importantly during their exit examination, enough weightage should be given to endoscopy skills including (a) knowledge of indication, contraindication and complication, (b) practical evaluation of technical aspect e.g. colonoscopic procedure can be assessed by intubation at splenic flexure, reaching cecum, entering ileum etc., (c) interpretation of endoscopic findings. It is expected that cecal intubation rate should be ≥90% in last 40 cases prior to completion of training in colonoscopy (excluding cases with severe colitis or obstructive lesion, where cecal intubation is not possible or not indicated). Other aspects to be assessed include consent process, monitoring, management changes based on endoscopy findings. Final evaluation should always be done by external examination along with internal faculty. Trainee, not up to the mark should be reassessed after a gap of 4–6 months.

Level 3

Who?

This level of training should only be imparted to qualified Gastroenterologists or Gastrointestinal surgeons who have already been successfully trained during DM or DNB in medical gastroenterology, DNB or Mch in surgical gastroenterology or basic fellowship in GI endoscopy (Level 2). Training should be for a minimum of 1 year.

Where?

This training can be imparted at advanced centers that could be governmental or autonomous institutes as well as SGEI accredited nongovernmental organizations with adequate infrastructure and faculty. Center should have at least two faculty performing these advanced procedures on a regular basis.

How?

It is expected that these trainees have learned all aspects of level 2 training, and if there is any deficit, it should be taken care of. Main stress in this level of training however, will be on advanced ERCP (such as Hilar tumor, pancreatic endotherapy, cholangioscopy, drainage of WOPN etc.,) EUS (including FNAC and therapeutic), EMR, ESD, POEM as well balloon assisted enteroscopy. They should also understand pancreatico biliary anatomy as seen at ERCP and at EUS (cross-sectional anatomy) as well as radiation safety and oncological staging. Log book as mentioned should be maintained. Table 3 gives the list of minimum number of procedures, which a trainee must perform before he/she is assessed for competency for level 3.

Training will not be only for achieving competence in advanced procedure, but also to learn art of teaching and carrying out research in the field of endoscopy.

Evaluation?

Evaluation should be as for level 2. Technical assessment for ERCP should include cannulation of desired duct, sphincterotomy, stone extraction, hilar stenting, pancreatic stenting. EUS assessment should include intubation of esophagus, crossing pylorus, imaging the desired organ, performing a successful FNAC and proper tumor staging. SGEI if involved in evaluation process may be able to certify the trainee.

Table 2: Minimum no. of procedures for competence assessment for level 2

Procedure	Number
Upper gastrointestinal endoscopy	200
Nonvariceal bleed therapy	10
Variceal therapy	25
Stricture dilatation	15
Colonoscopy	125
Polypectomy	20
Percutaneous endoscopic gastrostomy	10
Capsule Endoscopy	25
ERCP (diagnostic, sphincterotomy, biliary stent, stone extraction)	25

Table 3: Minimum no. of procedures for competence assessment for level 3

Procedure	Number
Endoscopic ultrasound	150
Pancreaticobiliary	75
Luminal (including tumor staging)	75
Endoscopic ultrasound – guided fine-needle aspiration and cytology/drainage	40
Endoscopic retrograde cholangiopancreatography	150
Biliary cannulation	100
Biliary sphincterotomy	50
Biliary stenting	25
Complex procedures (hilar tumor therapy mechanical lithotripsy pseudocyst drainage)	25
Pancreatic cannulation (when desired)	50

Conclusion

We feel the above format may not be an ideal one, but it is a practical approach considering the existing scenario of our education set up and our demand to supply ratio. We also strongly believe that our own perspective about this issue may change over next decade. However, what we are suggesting now, is one we can actually achieve in present time. No attempt has yet been made to recommend training guidelines specific for pediatric endoscopic practice.

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