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Multisociety Sedation Curriculum for Gastrointestinal Endoscopy

Podcast interview: www.gastro.org/gastropodcast. Also available on iTunes.

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The Multisociety Sedation Curriculum for Gastrointestinal Endoscopy (MSCGE) grew out of the need for a complete and programmatic approach to the training of procedure sedation. As a natural outgrowth of the Gastroenterology Core Curriculum, the sponsoring societies thought that a comprehensive document covering the aspects of procedure sedation from pharmacology, periprocedure assessment, airway management, and the use of anesthesia services was necessary for a variety of reasons. Chief among these was to ensure a standardized basis for instruction through the use of competency-based training.

This constitutes a living document that represents the sponsoring societies' vision of best practices in procedure sedation training based on published data and expert consensus. It provides a framework for developing an individual plan of study and growth that should be tailored to meet the needs of each individual trainee based on the strengths and special qualities of each individual training program. Additionally, the curriculum can serve the practicing gastroenterologist in the updating of both knowledge and skills. The curriculum will continue to evolve with time as new knowledge, methods of learning, novel techniques and technologies, and challenges arise. This edition has been divided into an overview of training and 11 sections encompassing the breadth of knowledge and skills required for the practice of procedural sedation for GI endoscopy.

This MSCGE represents a joint collaborative effort among the national gastroenterology societies—the American Association for the Study of Liver Diseases, the American College of Gastroenterology, the American Gastroenterological Association Institute, and the American Society for Gastrointestinal Endoscopy. In addition, the Society for Gastroenterology Nurses and Associates played a crucial role in the development of the MSCGE. Other professional non-GI societies and regulatory organizations were invited to take part in the development of the MSCGE. This included the American Association of Nurse Anesthetists, the American Society of Anesthesiologists (ASA), and the Centers for Medicare and Medicaid Services (CMS). The American Association of Nurse Anesthetists did not respond to inquiries, CMS decided not to participate, and the ASA appointed a nonvoting observer who participated in the developmental process.

The executive committees of each of the sponsoring societies, as well as several subject matter experts, made specific recommendations for revising the core curriculum. Each society then named representatives who were charged with overall responsibility for developing, communicating, and distributing the curriculum. Throughout this document, the paramount importance of practice and research based on the highest principles of ethics, humanism, and professionalism is reinforced.

Sedation Pharmacology

Importance

Endoscopic sedation strives to seek a balance between patient comfort and drug-related side effects. Optimal sedation allows the patient the greatest degree of comfort while preserving the greatest degree of safety. To achieve this, the endoscopist must fully understand the sedation that he or she is are using. This also requires careful consideration of the patient, the endoscopy facil-

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Abbreviations: ACLS, Advanced Cardiac Life Support; ASA, American Society of Anesthesiologists; BIS, bispectral index; CMS, Centers for Medicare and Medicaid Services; MSCGE, Multisociety Sedation Curriculum for Gastrointestinal Endoscopy.

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ity, and the variables of the procedure itself. Patient factors include age, weight, medical history, concurrent medications, intubation assessment, preprocedure anxiety, and pain tolerance. Procedure variables include the amount of anticipated discomfort, the duration of examination, and how invasive the procedure will be. The drugs most widely used for endoscopic sedation were the benzodiazepines and opioids. Recently, there has been growing interest in the use of other agents with unique pharmacologic properties designed to enhance sedation and analgesia. The endoscopist should be familiar with the sedation agents used including the drug's pharmacokinetic parameters (time of onset, peak response, and duration of effect), pharmacodynamic profile (individual variations in clinical response to a drug), elimination profile, potential adverse effects, and drug-drug interactions.

Goals of Training

Trainees should gain an understanding of the following:

1. The pharmacokinetics and pharmacodynamics of different sedation agents, their synergy and potential interactions with other medications and potential adverse reactions.
2. Mastery of the titration of these agents for the desired level of sedation. For the vast majority of endoscopic cases, this should be moderate sedation.

Training Process

1. Trainees should develop a thorough knowledge of the pharmacokinetics and pharmacodynamics of sedation agents before embarking on endoscopic training.
2. Trainees should develop expertise in the administration of sedation medications under direct supervision in the endoscopy suite. If a high-fidelity sedation simulator is available, this should be used before training in the endoscopy suite. A brief primer in sedation pharmacology is provided in Appendix A.

Assessment of Competence

Knowledge of sedation pharmacology should be assessed as part of the overall evaluation of trainees in gastroenterology during the fellowship. Questions relating to sedation pharmacology should be included on the board examination and should reflect a general knowledge of this content.

Informed Consent for Endoscopic Sedation

Importance

The ethical and legal requirement to obtain informed consent before performing endoscopy derives from the concept of personal (patient) autonomy. The competent patient, after receiving appropriate disclosure of the material risks of the procedure and understanding those risks and the benefits and alternative approaches, makes a voluntary and uncoerced informed decision to proceed.

The process of obtaining informed consent is both a basic ethical obligation and also a legal requirement for physicians. It allows the patient to gain an understanding of the proposed treatment and the risks involved, as well as learn about alternatives or voice any concerns or questions. The physician has the opportunity to ask about the patient's treatment goals and discover any patient-specific information that will enable the most optimal choice of treatment. When an informed patient agrees to proceed with a course of treatment, this allows substantial transfer of the risk of adverse outcome to the patient who understands and accepts the imperfect nature of the procedure and therapy.

Most state laws specify that obtaining informed consent is a nondelegatable duty, ie, it must be performed by the physician and cannot be relegated to one's staff or endoscopy nurse. However, consent is a process, and if sufficient and thorough information is provided, the final portion, in which the physician finalizes consent before the procedure and asks the patient whether there are any other questions remaining, may be very brief. This is most important for the success of an open-access process, so that open-access patients have already received information and have been given the opportunity to ask questions to satisfaction before preparation for the procedure. Language issues need to be addressed by using an interpreter. If the patient is unable to give consent, an appropriate legal representative should be sought.

A risk management recommendation particularly relevant for informed consent for open access is to have an intake/preparation process for open access in which the patient is sent or verbally given information about the procedure, including the purpose, description of the procedure, and risks, benefits, and alternatives. It would be useful to instruct the patient to call in if any concerns or questions occur after having read the information and document this instruction. Further, one could instruct the office staff to be alert to patients who appear uncertain, seem to have many questions, or very worried about proceeding; these patients may be best served with a preprocedure consultation. At the time of the open access, the physician can meet state law obligation by briefly summarizing the information.

The nature of moderate sedation is such that a patient may perceive, but may not be aware of the context and surroundings to sufficiently understand the implications of a demand to stop the procedure. The discomfort is likely to be short-lived and the procedure safe and successful, and often the patient has no recall of difficulty or any request to stop the procedure. Additional medication or additional techniques may allow more comfortable completion of the procedure. Indeed, the patient may wish the discomfort to stop, not the procedure! However, the endoscopist and staff must be aware that consent can be withdrawn. The author surmises, based on conversations with experienced endoscopists, that most requests to stop are not truly withdrawal of consent, but an artifact of sedation causing misperception of the context of procedure activity. However, the prudent endoscopist will