Quality Assurance in the Endoscopy Suite

Sedation and Monitoring

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KEYWORDS

• Moderate sedation • Propofol • Colonoscopy • Quality • Endoscopy safety • Procedural sedation

KEY POINTS

- Preprocedure assessment includes proper informed consent, a history and physical examination, risk assessment, a sedation plan, and a team pause or time-out.
- Intraprocedure time begins with sedation and ends with removal of the endoscope and includes guideline-based patient monitoring and complication management.
- The postprocedure assessment includes established discharge criteria, proper patient instructions, tracking of adverse events, and collection of patient satisfaction scores.
- Competency in procedural sedation includes formal training and education in sedation, an understanding of the pharmacokinetics and pharmacodynamics of sedation agents, and proper endoscopic personnel.

INTRODUCTION

With the rapid growth of endoscopic procedures, particularly in screening of colon cancer, the importance of patient tolerance and safety while conducting these procedures has also increased. Important for optimal performance and quality outcomes are a variety of medications for sedation and analgesia. Endoscopic sedation has traditionally included a benzodiazepine, most commonly midazolam, and an opioid analgesic, usually fentanyl. Propofol is an increasingly used sedative option through a variety of administration modalities and personnel. While the utility of the different sedation options and newer sedation modalities are explored, it is imperative that good quality-assurance measures be followed and competency maintained.

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This article reviews the endoscopic sedation and monitoring quality initiatives and guidelines in the current literature.

QUALITY-ASSURANCE COMPETENCIES

Preprocedure Assessment

Before the endoscopic procedure, it is imperative that the safety of the patient be considered. Safety in endoscopic sedation can be categorized into several components, including but not limited to patient risk assessment, informed consent, monitoring compliance, training/education, and adverse event tracking.[1,2] In addition, the American Society for Gastrointestinal Endoscopy (ASGE) recommends measuring preprocedure safety by how frequently certain issues are addressed, including informed consent, completion and documentation of a history and physical examination, risk assessment, development of a sedation plan, and performance of team pause or time-out.[3] The essential steps for preprocedure assessment are discussed here.

Informed consent

Informed consent is a crucial component of all endoscopic procedures and adheres to the medical ethical principle of patient autonomy. It allows patients to be involved in their own care and creates the opportunity for each patient to ask questions and assist in decision making. With the exception of some emergent procedures, every attempt should be made to obtain and document proper informed consent before diagnostic and therapeutic endoscopic interventions. The discussion should include the sedation plan as well as the benefits and risks of sedation. Benefits include patient comfort and improvement of diagnostic procedure performance and therapeutic yield. Important risks include unintended deeper levels of sedation, suppression of respiration, postoperative somnolence, aspiration, and adverse reactions to sedation medications. Furthermore, the clinician who administers the sedation should personally obtain consent for sedation, and this should be done separately if the endoscopist will not be the sedation provider.

There does not seem to be any consensus on the exact timing and location for obtaining informed consent. However, the consent should ideally be obtained when there is sufficient time to explain and answer all questions in an environment that is comfortable for the patient.

History and physical examination

Each patient should undergo an assessment of medications, medical problems, and allergies, and a focused physical examination before sedation and endoscopy. This process should be done before the endoscopic procedure and thus should be separate from the endoscopy report. There should be a focus on identifying the potential complications from sedation and endoscopy, as well as the indications for the selected sedation. Specific history points that should be emphasized include previous sedation reactions (including both personal and family history of reactions to anesthesia), medication allergies, and potential medication interactions. Social history should incorporate any history of tobacco, alcohol, or substance use or abuse.

Risk assessment

Before sedation and endoscopy begins, each patient should be risk stratified to identify potential complications and adverse events. Objective methods such as the American Society of Anesthesiologists (ASA) score should be used to guide the sedation plan; this includes whether it is safe to proceed with the current plan with or without modifications and can be used as a screening tool for sedation.