

Sedation in Gastrointestinal Endoscopies: Things to be corrected?

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The peculiar question of an article, called editorial, which tends to examine critically and to go through in details for the purpose of making additions, corrections and revisions on a experts review, usually ends –to fails- to an awkward position; the usual awards are comments in the pedantic manner the latter reviewer carried on his so-call task. My respond, to paraphrase Sir Steven Runciman, it is beside the point for critics to complain that I have not written the article that they would have written had they undertaken the theme¹.

Despite the profusion of review articles, monographs, guidelines, pertinent books and internet sites, there still is a place for a comprehensive review on “Sedation in Gastrointestinal Endoscopies” by joining efforts of anaesthesiologists and gastroenterologists. The spherical approach always deletes existing barriers between specialties for the benefit of individual patient. It is indeed obvious, from the two first paragraphs, that the authors adopt the stance of sedation; the continuum of anxiolysis to general anesthesia makes me most happy as a possible endoscopic patient. The absence of discomfort, stress, and pain during the gastrointestinal endoscopic procedures it is a “must”, even for the sake of the comfort of the examiner/endoscopist. After establishment the notion of the “sine qua non” for the sedation, the authors are targeting to the appropriate level and pharmaceutical lever, according to the patient’s clinical situation and the concomitant needs. Benzodiazepines, especially midazolam, alone or in combination

with opiates, and propofol are mentioned. To our opinion, the continuum of sedation – analgesia – anaesthesia has to be reminded to all involve, non-anaesthesiologists as well as anaesthesiologists, for the sake of good practice. Table 1 is referring to practice guidelines for sedation and analgesia by non-anaesthesiologists^{2,3}.

The article by Manolaraki et al.⁴ focuses to safety parameters during endoscopic procedures. The American Society of Anesthesiologists (ASA) guidelines for sedation and analgesia by non-anaesthesiologists are mentioned without mentioning the guidelines of American College of Gastroenterology⁴. Julie Cantor-Weinberg, M.P.P., Vice President of Public Policy for the American College of Gastroenterology (ACG) gave a speech in support of gastroenterologists-administered sedation (May 7,2008). Obviously the gap between ASA and ACG, probably due to financial reasons, raises a paramount obstacle towards the safety of the patients and foretells the consequences of legal implications in case of an accident. Nevertheless, the clinical trial data to support fospropofol use by Non-Anaesthesiologists for sedation had been published⁶⁻⁸. We believe to *virtus in medio stat* (virtue stands in the middle).

Although the authors⁴ present the pertinent literature meticulously, the tool [described on table 1] they use for sedation assessment is obsolete, to my opinion; it would be better to use the Modified Observer’s Assessment of Alertness/Sedation (MOAA/S) scale, ranging from 1 to 5, plus level 6, which is a subjective sedation assessment scale (table 2).

Regarding colonoscopy, the authors adjourn freely though the literature comparing non-sedation techniques to various regiments⁵; benzodiazepines, opioid, such as alfentanil or remifentanil, propofol, pethidine and their combination are evaluated for better haemodynamic stability, less respiratory depression, and significantly faster recovery and hospital discharge. Patient-control anal-

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Table 1.

Continuum of Sedation and Analgesia				
	Minimal Sedation	Moderate Sedation	Deep Sedation	General Anesthesia
Responsiveness	Normal response to verbal stimulation	Purposeful response to verbal and tactile stimulation	Purposeful response after repeated or painful stimulation	Unarousable, even with painful stimulation
Airway	Unaffected	No intervention required	Intervention may be required	Intervention often required
Spontaneous ventilation	Unaffected	Adequate	May be inadequate	Frequently inadequate
Cardiovascular Function	Unaffected	Usually maintained	Usually maintained	May be impaired

Table 2.

Modified Observer's Assessment of Alertness/Sedation Scale	
Responsiveness	Score
Agitated	6
Responds readily to name spoken in normal tone (alert)	5
Lethargic response to name spoken in normal tone	4
Responds only after name is called loudly and/or repeatedly	3
Responds only after mild prodding or shaking	2
Does not respond to mild prodding or shaking	1
Does not respond to deep stimulus	0

gesia (PCA) during digestive endoscopic procedures, the fospropofol administration and the slippery slope between mild sedation and general anesthesia with the use of these regimens are discussed thoroughly. To our knowledge, the first computer-assisted personalized sedation system (CAPS) designed for physician/nurse teams to provide minimal to moderate sedation levels with propofol for colonoscopy and disorders of the upper gastrointestinal tract has been evaluated -1000 patients pivotal trial, SEDASYS System, 2008 - and the results are promising. The system "continuously monitors and records six patient parameters (oxygen saturation, respiratory rate, heart rate, blood pressure, end-tidal carbon dioxide and patient responsiveness) and it automatically detects and responds to signs of over sedation (oxygen desaturation and low respiratory rate/apnoea) by stopping or reducing delivery of propofol, increasing oxygen delivery and automatically instructing patients to take a deep breath. The device is currently an investigational device limited by U.S. law to investigational use only"¹.

Regarding oesophagogastroduodenoscopy, the authors present many studies that compare conventional OGD under sedation with OGD by small diameter instruments, they focus on the problems of the local anaesthetic application to nostrils, pharynx and hypo-pharynx than render sedation minimal. The complexity of the endoscopic retrograde cholangiopancreatography, and endoscopic ultrasonography are usually completed with deep sedation.

The reviewers tend to agree with the majority of the investigators towards the use of propofol as the main pharmaceutical agent of sedation and proper introduction, if needed, to anaesthesia; the latter commenced by a target-controlled infusion system (TCI) controlled by an anaesthesiologist⁹.

Most interesting and useful parts of this review are those referred to the extremes of ages; sedation in elderly and in paediatric patients. Most gastrointestinal endoscopy, in the geriatric patients, is performed with the benefit of conscious sedation. Cardio-pulmonary complications are often imminent and required careful monitoring and proper intervention. Paediatric conscious sedation and general anesthesia are commonly used for paediatric endoscopy, usually based upon age or anticipated patient intolerance for the procedure.

The article by Manolaraki et al.⁴ includes two useful tables on definitions of clinical states of sedation as proposed by the ASA's Task Force on Sedation and Analgesia by Non-anaesthesiologists, and the pharmacological properties of sedation agents for endoscopy. Also, one hundred and thirteen references are included rendering the offered knowledge strongly "back-upped."

In summary, the systematic review on "sedation in gastrointestinal endoscopies"⁴, has the advantage of emanate from the combined sources of anaesthesiology and gastroenterology specialists, provides an interesting insight into everyday medical practice concerning the administration of sedation and analgesia for diagnostic and therapeutic procedures in the field of gastrointestinal endoscopy, and it is informative to both kind of readers related to the topic and those who may not.

E-REFERENCES

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