EDITORIAL

Enhancing the current evidence on endoscopist-directed propofol-based sedation

During the last years, there is more and more scientific evidence about the safety and feasibility of non-anesthesiologist administration of propofol (NAAP) in gastrointestinal endoscopy (1), reducing sedation induction and recovery time as well as increasing patient and endoscopist satisfaction (2). Furthermore, a similar risk of adverse events compared with traditional agents (3) or anesthesiologist administration of propofol (AAP) has been described (4). The present special issue of the *Spanish Journal of Gastroenterology (Revista Española de Enfermedades Digestivas)* focusses on NAAP in different settings, including complex endoscopic procedures.

Several meta-analysis and well-designed randomized controlled trials in non-advanced endoscopy concluded that NAAP is safe (5), with a similar rate of adverse events compared to AAP (6). Moreover, these outcomes have been similar in specific populations as cirrhotic patients (7). Advanced procedures as endoscopic retrograde cholangiopancreatography (ERCP), endoscopic ultrasound, balloon-assisted enteroscopy and endoscopic submucosal dissection benefit from deep sedation, because of a higher quality of the examinations, increased satisfaction for both the patients and medical personnel, and shorter recovery and discharge times (8,9). Sethi S et al. (10), in a meta-analysis of nine prospective randomized trials comparing propofol with traditional sedative agents for advanced endoscopy, concluded that propofol is associated with shorter recovery time and better sedation and amnesia level, without an increased risk of cardiopulmonary complications. Other similar meta-analysis (11) comparing NAAP-administered propofol sedation for advanced endoscopic procedures with those of AAP reported the safety of NAAP sedation at the cost of decreased patient and endoscopist satisfaction. Moreover, anesthesiology support may be necessary in 0.4% of cases (12).

Regarding ERCP, propofol sedation is safe (13,14), leading to shorter recovery time without an increase of cardiopulmonary side effects (15), and similar cannulation rates (16). The current observational prospective study by Luzón Solanas et al. (17), published in this issue, assesses the safety of endoscopist-directed nurse-administered propofol-based sedation in 661 patients who underwent an ERCP. Overall, they concluded an adverse event rate of 9.6%, according to previously published data (18). However, one major limitation in the comparability within studies is the composite outcome of "adverse event", including in most of cases hypoxemia (transient, clinically relevant or leading to airway maneuvers) and hypotension. These events can be frequent and have no clinical consequences in most cases. Thus, the clinical relevance of these findings and the heterogeneous definition of this main outcome leads to a difficult interpretation, particularly in the case of hypoxemia. Additionally, different patient populations of diverse studies considering ERCP may not be comparable. In the present report, the hypoxemia rate was 5.7% and an additional manoeuvre was required in all cases. Anyway, the risk factors associated with an increased adverse event rate are quite similar within different reports (19). The authors concluded that age, body mass index, and the duration of the exploration were independent predictors of adverse events in multivariate analysis.

In a second paper by López-Roses et al. (20) with focus on balloon-assisted enteroscopy, they reported a minor adverse event rate of 22.7% in a single-cohort of 44 procedures. This outcome may have been influenced by the high comorbidity (68%) and ASA-III status rates (20.5%). However, all adverse events were managed successfully by simple maneuvers and no major complications were observed.

Overall, a trained professional dedicated to the administration and supervision of sedation (21) is essential in daily practice to ensure the success of the procedure and the NAAP for our patients. Finally, this special number contributed important knowledge of NAAP, suggesting that endoscopist-directed propofol-based sedation is safe in gastrointestinal endoscopy (22). A dedicated issue to this topic is widely justified by the exponential increase in the use of propofol by gastroenterologists in our country (23). Hopefully, further randomized controlled trials will confirm these outcomes in specific advanced procedures for selected populations.

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