Abstract

Background and Aims

Advanced age is an important risk factor for adverse events (AEs) during propofol sedation for endoscopic procedures. This study aimed to evaluate the safety and efficacy of non-anesthesiologist-administered propofol (NAAP) sedation with a target-controlled infusion (TCI) system in elderly patients during endoscopic retrograde cholangiopancreatography (ERCP).

Methods

This study retrospectively analyzed 482 patients who underwent ERCP under propofol sedation with a TCI system at Iwakuni Medical Center between January 2014 and October 2016. The patients were divided into three groups according to their age: Group A, <70 years (n=130); Group B, ≥70 and <85 years (n=224); and Group C, ≥85 years (n=125). We compared the propofol dose and AEs during ERCP.

Results

The median total infusion dose and minimum and maximum target blood concentrations of propofol were 336 mg, 2.2 μg/mL, and 2.2 μg/mL in Group A, 184 mg, 1.0 μg/mL, and 1.4 μg/mL in Group B, and 99 mg, 0.6 μg/mL, and 1.0 μg/mL in

Group C, respectively, with older groups requiring a lower dose ($p<0.0001$). Hypotension was observed in 23 patients (4.8%), with no significant difference between the groups (Group A: 2.3%; Group B: 6.3%; Group C: 4.8%; $p=0.24$). Hypoxemia was observed in 16 patients (3.3%), with no significant difference between the groups (Group A: 3.1%; Group B: 4.9%; Group C: 0.8%; $p=0.17$). All AEs were immediately resolved, and no procedures were aborted.

Conclusion

NAAP sedation with a TCI system during ERCP may be acceptable in elderly patients with a lower dose of propofol than that used in younger patients.