Abstract

Background: Procedural sedation and analgesia (PSA) is used during colonoscopy to facilitate the procedure and relieve patient's discomfort. The foremost risk of PSA is respiratory depression. Lidocaine could be a promising additional analgesic in IBD patients to minimise side effects of PSA.
Our primary objective was to investigate whether i.v. lidocaine reduces the amount of alfentanil used during PSA in IBD patients. Additionally, we investigated whether lidocaine reduces cardiorespiratory incidents and the amount of propofol required during the procedure.

Methods: A randomised, double-blind, placebo controlled study was performed at the endoscopy unit of the Radboud University Medical Centre from November 2016 to December 2018. Seventy-six patients with IBD, ASA 1 or 2, between 18 and 65 years, scheduled for colonoscopy with PSA were included. Patients received lidocaine 1.5 mg kg^{-1} followed by a continuous infusion of 2 mg kg^{-1} h^{-1} (intervention group, *n*=38) or 0.9% saline in equivalent volumes (control group, *n*=38) during colonoscopy.

Results: There was a reduction in the use of alfentanil (327µg (95%CI=-31-505, p=0.082)), and propofol (39 mg (95%CI=-5-83, p=0.083)) in the lidocaine group compared with the control group. Ten patients (26%) in the control group and 8 patients in the lidocaine group (21%) experienced a period of hypoxia (p=0.788). In both groups, no periods of hypotension were noted.

Conclusion: Our investigation has shown a reduction in the use of propofol and alfentanil in patients undergoing colonoscopy with PSA. The differences were not statistically significant. Lidocaine did not reduces the incidence of cardiorespiratory events.

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