Introduction: As colonoscopy has been routinely performed under propofol deep sedation in recent years, there is growing interest in evaluating the efficacy and safety of using multiple anesthetic and analgesic drugs for ambulatory colonoscopy. Nalbuphine is a widely used major analgetic and is an ideal drug to reduce the propofol dose during outpatient colonoscopy. The aim of our present study was to evaluate the safety and effectiveness of 397 ambulatory colonoscopies carried out under propofol versus propofol and nalbuphine deep sedation with respect to endoscopic and anaesthetic success rate, complications and patient satisfaction.

Methods: After a randomized, prospective collection and evaluation of patient data from 190 patients who received nalbuphine and propofol and another 207 who received propofol alone the coecal intubation rate, the incidence of major and minor cardiovascular and respiratory complications were calculated. The propofol induction and total dose, the time from induction to spontaneous awakening, the recovery time and Post Anaesthetic Discharge Scoring System (PADSS) were also analysed. Finally patient satisfaction was evaluated by comparing the results of visual analogue scales (VAS) filled by 55 patients from both groups respectively.

Results: No significant difference was found in the coecum intubation rate, mean awakening time, mean recovery time and patient satisfaction. No major cardio-respiratory complications occurred. Minor cardio-respiratory complications occurred in 6 patients.

Conclusions: Colonoscopy procedures implemented in propofol deep sedation administered by an anesthesiologist proved to be completely safe with excellent coecum intubation rate. Low-dose nalbuphine combined with propofol is an effective and economic alternative, but side effects of morphine agonists reduce the PADSS and may prevent timely patient discharge.

Significant differences manifested between the two groups in terms of propofol doses and PADSS scores.

The results of PADSS demonstrated more symptoms which prevented timely patient discharge in some of patients in the nalbuphine group (p<0.05).