

Optimal drugs for sedation in pediatric colonoscopy

Sir,

Recently, I read with interest the article by Yuan et al. on the performance of pediatric colonoscopy with the use of continuous lidocaine infusion.^[1] The authors suggest that intravenous lidocaine reduces the required dose of sufentanil and propofol. I congratulate the authors for discovering a new regimen, and having recently worked out an optimal method of performing pediatric gastrointestinal endoscopy (GIE), I have some comments based on my opinion.

In South Korea, sedation induction and GIE are mainly performed by endoscopists without any assistance from anesthesiologists. According to the pediatric GIE sedation guidelines, midazolam, ketamine, and propofol were used alone or in combination until recently. An endoscopist can use approximately 10 minutes of procedural time by administering midazolam 0.1 mg/kg (maximum 3 mg) and ketamine 1 mg/kg (maximum 40 mg) similar to upper GIE when performing a colonoscopy. If the patient recovers over time, by adding 1 mg/kg of propofol and then 1 mg/kg of pethidine, pediatric colonoscopy can be performed comfortably.

According to the authors' results, the group using lidocaine used propofol 4.3 mg/kg and sufentanil 0.06 mg/kg, and the group not using lidocaine used propofol 5.5 mg/kg and sufentanil 0.1 mg/kg, for 12 minutes. Even if lidocaine is not used, it is likely that 12 minutes of colonoscopy sedation is possible with just 4.3 mg/kg of propofol and 0.06 mg/kg of sufentanil. Procedural sedation is not necessarily identical to that of general anesthesia. Deep sedation can be obtained if multiple drugs are used together, and the dose of the drug is increased; however, the risk of hypoxemia or blood pressure fluctuation also increases. Although the authors' reduced dose of propofol when using intravenous lidocaine is significant in comparative statistics, but the difference is not significant when considering its absolute dose. Since the sample size was small, the effect on recovery time and desaturation is thought to be due to the difference in the amount of sufentanil used. It would have been better if the study design had the same amount of propofol and the depth of sedation was adjusted only with the additional amount of sufentanil. The authors were also concerned about the possibility of toxicity occurring as soon as the plasma concentration of lidocaine exceeded 5 µg/mL. Other studies have reported

adverse reactions due to the use of lidocaine in children. The metabolism of lidocaine in young children can cause drug concentrations by various factors, and it is necessary to evaluate drug concentration and the risks involved in younger children. When using a combination of drugs that are known to be safe, it is preferable to find the minimum dose of each drug that causes sedation, and is sufficient to perform the procedure comfortably. It is dangerous to generalize that lidocaine can be safely used with such a small group of children. Its safety needs to be verified in studies with larger sample sizes.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Soon Chul Kim

Department of Pediatrics, Jeonbuk National University Medical School and Hospital, Jeonju, South Korea

Address for correspondence: Prof. Soon Chul Kim,
Department of Pediatrics, Jeonbuk National University Children's Hospital,
20 Geonji-ro, Deokjin-gu, Jeonju - 54907, South Korea.
E-mail: kimsc@jbnu.ac.kr

REFERENCE

1. Yuan C, Wang C, Wu J, Gao N, Li K, Li Y, *et al.* Continuous Infusion of Lidocaine in Pediatric Colonoscopy: A Randomized Double-Blind Placebo-Controlled Study. *Saudi J Gastroenterol* 2021; doi 10.4103/sjg.sjg_275_21.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code:	Website: www.saudijgastro.com
	DOI: 10.4103/sjg.sjg_480_21

How to cite this article: Kim SC. Optimal drugs for sedation in pediatric colonoscopy. *Saudi J Gastroenterol* 2021;27:391.

© 2021 Saudi Journal of Gastroenterology | Published by Wolters Kluwer - Medknow