

CORRESPONDENCE



Is it necessary for all patients to use prokinetic agents to place a trans-pyloric tube?

Gang Li¹, Lu Ke¹, Zhihui Tong^{1*}, Weiqin Li^{1*}, Xin Ouyang² and Chunbo Chen³

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Initial correspondence from Dr. Li et al.

Dear Editor,

In view of the wide use of prokinetic agents in clinical practice, we read Hu et al.'s article with great interest [1]. It is a well-organized multicenter randomized controlled trial (RCT) and demonstrates that erythromycin is non-inferior to metoclopramide in facilitating post-pyloric placement of spiral tubes in critically ill patients. With exposure to prokinetic agents and dose accumulation, safety issues need to be taken seriously because cardiotoxicity and the development of bacterial resistance were reported to occur in critical patients, possibly caused by erythromycin, and neurological reactions were related to metoclopramide [2].

Actually, it is repeatedly reported that placement of a trans-pyloric tube can be performed with high success rates without requiring prokinetic drugs, which is also the current practice in our center. In our ICU, we place trans-pyloric tubes by an ultrasound-assisted method without prokinetic agents, and the success rate can reach more than 90% [3]. We performed a pilot study comparing the ultrasound-assisted method vs. traditional endoscopy method in 53 severe acute pancreatitis patients during a 12-month period. There were 28 patients [28/30 (93.3%)] with confirmed successful post-pyloric placement in the ultrasound-assisted group without prokinetics and 22 patients [22/23 (95.6%)] in the endoscopy group. Therefore, adding a placebo group should be considered in further studies on this topic.

In conclusion, considering the potential harm to critically ill patients caused by prokinetics, safer and quicker bedside methods could possibly serve as the primary choice. Further studies comparing prokinetics with placebo control are warranted to guide current clinical practice.

Reply from Drs. Ouyang and Chen

We would like to thank the authors for their interest and comments on our study. Although the ultrasound-assisted method without prokinetics is the current practice in your center and the success rate can reach more than 90%, the method adopted in our practice has some core differences with yours, and it is essential to elaborate on these controversies here.

First, we use a spiral nasoenteric tube designed to utilize peristalsis to pass the tip through the pylorus, and we had demonstrated that prokinetics could improve the success rate of post-pyloric placement [1, 4]. Thus, prokinetics are indispensable. Second, no serious adverse events were explicitly reported in various RCTs on erythromycin or metoclopramide and nor did ours. Additionally, our study may indicate to some extent that erythromycin used in the short term would not induce bacterial resistance. Third, our method does not rely on any special equipment even ultrasound, and the procedure is as simple as just placing a nasogastric tube. Thus, we believe our method with prokinetics has greater potential to be widely generalized, especially in China, a developing country with limited medical facilities. More importantly, the overall expected success rate can be elevated to over 90% when integrating appropriate selection of patients [5], prokinetic agent assistance [1, 4], and rescue therapy [1].

Conclusively, prokinetics are necessary when appropriate to place a post-pyloric tube by our method. However, more attention should be paid to different prokinetic

*Correspondence: njzyantol@hotmail.com; njzy_pancrea@163.com

¹ Surgery Intensive Care Unit (SICU), Department of General Surgery, Jinling Hospital, Medical School of Nanjing University, No. 305 Zhongshan East Road, Nanjing, Jiangsu, China

Full author information is available at the end of the article

Gang Li and Lu Ke contributed equally to this work.

indications and contraindications to choose the optimal one according to each patient's characteristics.

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Author details

¹ Surgery Intensive Care Unit (SICU), Department of General Surgery, Jinling Hospital, Medical School of Nanjing University, No. 305 Zhongshan East Road, Nanjing, Jiangsu, China. ² School of Medicine, South China University of Technology, Guangzhou Higher Education Mega Center, Guangzhou, Guangdong, China. ³ Department of Intensive Care Unit of Cardiovascular Surgery, Guangdong Cardiovascular Institute, Guangdong Provincial People's Hospital, Guangdong Academy of Medical Sciences, 96 Dongchuan Road, 510080 Guangzhou, Guangdong, China.

Compliance with ethical standards

Conflicts of interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical approval

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