Perioperative Precision Medicine
ISSN: 2957-5443

Zentime

Letter to the Editor https://doi.org/10.61189/156428jxplrz

A novel nasopharyngeal airway set-Nasal Pharyngeal Set-flexible

Chenglong Zhu[1], Wenyun Xu[1,2], Zui Zou[1]

[1]School of Anesthesiology, Naval Medical University, Shanghai 200433, China. [2]Department of Anesthesiology, Second Affiliated Hospital of Naval Medical University, Shanghai 200003, China

Corresponding author: Zui Zou.

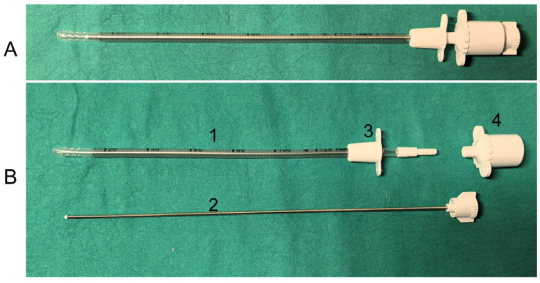
Declaration of conflict of interest: None.

Received October 26, 2024; Accepted January 7, 2025; Published September 30, 2025

Many patients, such as those who are obese, are prone to hypoxia during anaesthesia induction, painless gastroenteroscopy, and ICU sedation, which can lead to severe organ damage [1]. The traditional nasopharyngeal airway can effectively alleviate this problem, but it also introduces complications such as epistaxis [2]. NaPS^{flex} (Nasal Pharyngeal Set-flexible) is a novel nasopharyngeal airway set developed by our team, designed to address difficult airways safely and simply. It has been registered as a medical device in China (Zhejiang Medical Device Registration Approval No. 20232081212).

NaPS^{flex} consists of a reinforced catheter, a spring core, a restrictive nose plug, and an adapter (**Figure 1**). The reinforced catheter has small holes underneath for ventilation. With an outer diameter of only 4 mm, it prevents nasopharyngeal compression damage during catheter retention. The catheter is made of a flexible material to reduce the risk of nasal mucosa abrasion. The spring core is flexible, allowing easy access to the nasopharyngeal lumen. The restrictive nose plug regulates the catheter's depth into the nasal cavity and helps secure it in place. Additionally, the catheter can be connected to either a nasal cannula or an anaesthesia machine's breathing line via the adapter for oxygenation.

Several randomized controlled studies, approved by the Ethics Committee of the Naval Medical University and currently in the process of data collection, may provide robust evidence of its safety and efficacy. We believe that the new nasopharyngeal airway set can be widely adopted by anesthesiologists due to its potential in airway management.



1: reinforced catheter; 2: spring core
3: restrictive nose plug; 4: adapter

Figure 1. NaPS^{flex} structure. (A) NaPS^{flex}; (B) Components of NaPS^{flex}.

Author contributions: Zui Zou conceived the original idea and supervised the project. Chenglong Zhu wrote the manuscript. Wenyun Xu helped shape the manuscript. All authors contributed to the article.

References

[1] Wang C, Zhao N, Wang W, et al. Intraoperative mechanical ventilation strategies for obese patients: a systematic review and network meta-analysis. Obes Rev 2015;16(6):508-517.

[2] Mort TC. Complications of emergency tracheal intubation: immediate airway-related consequences: part II. J Intensive Care Med 2007;22(4):208-215.

Address correspondence to: Zui Zou, School of Anesthesiology, Naval Medical University, 168 Changhai Road, Yangpu District, Shanghai 200433, China. E-mail: zouzui@smmu.edu.cn.