INNOVATION PARTNERSHIPS
UNIVERSITY OF MICHIGAN

Improved Esophageal Balloon Tamponade

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Life Sciences

Further information
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OVERVIEW

An improved gastroesophageal tamponade with enhanced insertion safety and usage efficiency

- Features LED and color-coded ports for precise insertion and easier differentiation
- Useful in emergency rooms, endoscopy units, and gastrointestinal surgery departments

BACKGROUND

Gastroesophageal tamponades are critical medical devices used to manage acute esophageal bleeding, commonly caused by varices. Historically, devices like the Minnesota Tube have been employed. These devices, while effective, possess distinct drawbacks, including complicated insertion processes and the risk of misplacement into the trachea instead of the esophagus, which can lead to fatal complications. Furthermore, the traditional designs have non-intuitive port configurations that can confuse healthcare providers, especially in emergency situations where time is of the essence. Consequently, there is a significant need for an advanced tamponade device that minimizes these complications, enhances efficiency, and ensures patient safety during the insertion process.

INNOVATION

Researchers have invented a form of gastroesophageal tamponade that significantly advances the traditional Minnesota Tube design by introducing an LED-equipped bougie for precise placement verification and color-coded ports for distinguishing between various functions. The LED light enables healthcare providers to verify that the device is correctly placed in the esophagus and not the trachea, thereby minimizing the risk of potentially fatal misplacements. The color-coded ports streamline the process of gastric and esophageal inflation and aspiration, reducing the likelihood of errors in fast-paced medical environments. This device is not only more user-friendly but also packaged as an all-in-one solution, complete with syringes for inflation. Potential real-world applications include emergency medical settings, intensive care units, and specialized gastrointestinal centers where rapid and accurate management of esophageal bleeds is critical.