Gastrostomy Feeding Tube That Prevents Leakage and Improves Patient Safety

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Technology description

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Gastrointestinal feeding tubes are placed in the stomach to provide nutrition to patients who have temporarily lost the ability to eat normally. The tubes are typically secured by an external retention ring on the outside skin surface and an internal retention member (small inflated balloon or bumper) inside the stomach. They tend to leak, however, causing skin irritation that can lead to infection. This new feeding tube, developed by UF researchers, allows for compression of the feeding tube shaft by the external retention ring, which can be easily adjusted and secured manually. The new design includes an external retention ring that provides a better grip, preventing dangerous slippage. Patients and primary-care providers can adjust the tubing when necessary, reducing emergency room visits, and healthcare costs.

This adjustable feeding tube prevents potentially dangerous leakage of gastric fluid, safeguarding patients against skin irritation and infections. Gastrostomy tube placement, a common surgical procedure, involves the insertion of a feeding tube through the abdominal wall into the stomach to provide nutrition. Available feeding tubes have external retention rings that are prone to slipping, which breaks the seal at the stomach wall and allows acidic gastric fluid to leak onto the skin. This leakage causes skin irritation and wounds that can progress to infection, requiring additional operations.

Researchers at the University of Florida have designed a feeding tube with an external retention ring that does not slip. This non-slip retainer ring prevents acidic leakage, skin irritation, infection, emergency room visits, and the need for additional surgeries. In the United States, more than 100,000 such procedures are performed every year on cancer and stroke patients, and others who cannot eat normally. The market for gastrointestinal feeding devices is expected to grow to $3.5 billion by 2024.

Application area

An improved gastrointestinal feeding tube that maintains the stomach lining seal, is easy to use, improves patient comfort, and prevents acidic leakage

Advantages

Eliminates slippage without the need for a suture, making the device user-friendly, safe, and cost-effective
Features an adjustable, non-slip design, enhancing patient comfort and reducing healthcare costs associated with tube replacement
Prevents leaks that cause skin irritation and infections, improving patient outcomes
Reduces medical/surgical complications that necessitate emergency evaluations and operative interventions, lessening the burden on healthcare providers

Institution

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