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A One-step Low-profile Gastrostomy Tube to Prevent Dislodgement and Improve Patient Outcomes

Stanford scientists have developed a low-profile percutaneous gastrostomy tube that can be placed in a single endoscopic procedure, reducing tube dislodgement and patient discomfort. The one-step placement method has the potential to lower complication rates and reduce costs associated with tube replacement.

Percutaneous endoscopic gastrostomy (PEG) tubes are widely used for long-term enteral feeding in patients who cannot maintain adequate oral nutrition. However, conventional PEG tubes protrude significantly from the abdomen, making them prone to accidental dislodgement and causing patient discomfort. Dislodged tubes can lead to serious complications and require costly emergency replacements. While low-profile gastrostomy tubes exist, they cannot be placed during the initial endoscopic procedure and instead require a secondary procedure to swap out the original protruding tube. This two-step process adds cost, delays the transition to a more comfortable device, and exposes patients to additional procedural risk.

The EasyPEG is a low-profile gastrostomy tube that can be placed during the initial endoscopic procedure, eliminating the need for a secondary tube exchange. The tube is pulled through the stomach endoscopically via guidewire, cut to size, and secured in position using an external bolster that interfaces with an intragastric balloon. This design allows the tube to sit flush against the skin immediately after placement, reducing the risk of accidental dislodgement and improving patient comfort from the outset. The EasyPEG has the potential to lower complication rates, reduce healthcare costs associated with tube replacements, and improve quality of life for patients requiring long-term enteral feeding.

Stage of Development:
Prototype

Applications

- Single-procedure placement of a low-profile gastrostomy tube
- Elimination of the secondary exchange procedure currently required to transition to a low-profile device
- Reduction of complications and costs associated with tube dislodgement

Advantages

- Only gastrostomy tube that achieves a low profile at the time of initial endoscopic placement
- Reduced risk of accidental dislodgement compared to conventional protruding PEG tubes
- Eliminates the need for a secondary tube exchange procedure, lowering procedural costs and patient burden

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