Fixation or Frustration? Rethinking T-Fasteners in PEG Tube Placement

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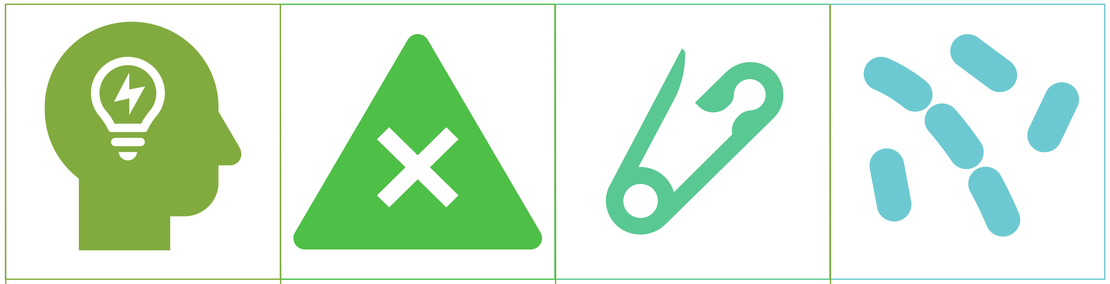
INTRODUCTION

- PEG tubes provide **durable enteral access** for patients unable to maintain oral nutrition
- **T-fasteners (gastropexy)** are frequently used to secure the stomach to the abdominal wall
- Evidence supporting routine T-fastener use is **limited and practice varies widely**
- *Objective*: Evaluate outcomes after PEG placement with vs without T-fasteners and identify factors associated with post-procedural complications.

METHODS

- Retrospective single-institution study (2018–2024)
- **873 PEG placements**
- PEG performed **OR or ICU bedside**
- **Primary outcome:** PEG infection
- **Secondary outcomes:** dislodgement, pneumoperitoneum, return to OR
- Multivariable logistic regression used to identify predictors.

RESULTS



Patient Characteristics

- Mean age **58.8 ±16 yrs**
- **57% male**
- OR placement **66%**
- T-fasteners used **60%**

Overall Complications

- Dislodgement **16%**
- Pneumoperitoneum **16%**
- Infection **5.6%**
- Return to OR **4.1%**

T-Fastener Outcomes

- No difference in:
- Dislodgement
- Pneumoperitoneum
- Return to OR

Predictors of PEG Infection

- Tube dislodgement **OR 3.07**
- T-fastener use **OR 2.53**
- Button depth **OR 1.39**

	No T-Tacks *(n=347)*	T-Tacks *(n=526)*	p-Value
Gender (Male)	57.9% (201)	57.0% (300)	0.834
Age	59.3 +/- 16.6	58.4 +/- 15.9	0.395
BMI	27.3 +/- 7.0	27.9 +/- 8.0	0.271
Prior PEG	4% (14)	4.8% (25)	0.738
Button Depth	3.1 +/- 1.0	3.0 +/- 1.1	0.737
Dislodged Tube	13.8% (48)	17.3% (91)	0.186
Days to Dislodgement	13 (IQR 7 – 27)	15 (IQR 8 – 27)	0.664
Pneumoperitoneum	14.7% (51)	16.2% (85)	0.634
PEG Infection	**3.2% (11)**	**7.2% (38)**	**0.011**
OR after PEG	4.3% (15)	4.0% (21)	0.862

Table 1. Comparison of outcomes by T-tack use

	OR (95% CI)	p-Value
Button Depth	*1.389 (1.075 – 1.794)*	*0.012*
T-Tack Use	*2.532 (1.604 – 5.854)*	*0.012*
Dislodgement	*3.065 (1.604 – 5.854)*	*<0.001*

Table 2. Regression analysis by PEG infection.
Hosmer and Lemeshow test Chi-square 9.504, p-Value 0.302

KEY FINDINGS

- **Bedside PEG placement demonstrated similar safety** to OR placement
- **T-fasteners increased infection risk** without reducing dislodgement or reoperation
- Routine gastropexy may introduce **additional infection risk from foreign material and puncture sites**
- **Tube dislodgement strongly predicts return to OR**, emphasizing early tube stability
- **Button depth may contribute to infection and reoperation**, suggesting importance of optimal positioning

CONCLUSION

- Bedside PEG placement demonstrated **similar safety to OR placement**.
- **T-fasteners increased infection risk** without reducing dislodgement or reoperation.
- **Routine use of T-fasteners should be reconsidered.**

FUTURE WORK

- **Prospective studies** comparing PEG placement with vs without T-fasteners
- Evaluation of **selective rather than routine T-fastener use**
- **Multicenter studies** assessing institutional variation in PEG technique
- Strategies to **reduce early tube dislodgement**