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**INTRODUCTION**

- In critically ill patients and trauma patients, adequate nutrition is essential for healing
- Up to 40% of ICU patients are malnourished
- Malnourishment is associated with poor outcomes including increased length of stay (LOS), morbidity, and mortality<sup>1,2</sup>
- There is no clinical protocol for initiating enteral nutrition (EN) after percutaneous endoscopic gastrostomy (PEG) tube placement
- Decision regarding when to initiate EN is typically deferred to the proceduralist and there is often hesitancy due to fear of potential consequences
- This study aims to show that early EN is as safe as delayed EN in trauma patients post-PEG tube placement

**METHODS**

- Multi-center retrospective cohort study (n=384)
- Patients in Prisma Health Trauma Registry:
  - Age ≥ 15 with PEG tube placement between January 1, 2017 and March 31, 2022
  - Exclusion criteria: PEG placement by IR or GI, revision procedures, unrecorded time to feed initiation
- Data collected:
  - Time after PEG tube insertion to initiation of EN
  - Feeding intolerance: high gastric residual, nausea/emesis, sustained diarrhea, ileus
  - ICU and hospital LOS
  - Rate of aspiration pneumonia (PNA) post-PEG tube placement

**RESULTS**

- Time from PEG to first feeding:
  - 0 to 6 hours in 48.9% of patients (n=188)
  - 6 to 12 hours in 15.3% of patients (n=59)
  - 12 to 24 hours in 21.8% of patients (n=84)
  - After 24 hours in 13.8% of patients (n=53)
- Adjustment made for age, sex, and Injury Severity Score
- Risk is higher when feeding is initiated sooner, but there is no statistically significant difference amongst intolerance rates
- Rate of aspiration PNA is similar amongst the four groups

Characteristic	Probability of Feeding Intolerance	SE	p
<b>Time from PEG to first feeding</b>			
0-6 hours	0.115	0.025	0.000
6-12 hours	0.036	0.022	0.107
12-24 hours	0.061	0.036	0.090
>24 hours	0.077	0.047	0.100
<b>Differences in Margins</b>			
0-6 hours vs 6-12 hours	0.080	0.033	0.015
0-6 hours vs 12-24 hours	0.054	0.041	0.180
0-6 hours vs >24 hours	0.038	0.048	0.426

**CONCLUSION**

- Other studies show similar patient complication rates when tube feeding is started immediately compared to when it is delayed<sup>3</sup>
- Most patients in this study started EN immediately (0-6 hours) after PEG tube placement
- These findings support that early EN after PEG tube placement is safe in trauma patients
- Early EN is not associated with an increased risk of aspiration PNA
- This study is limited by the retrospective nature of the project

**FUTURE**

- Early initiation of EN in trauma and critically ill patients is likely safe
- Clinical standardization of initiation of early EN for trauma patients after PEG placement is appropriate
- Prospective evaluation for potential benefit of early EN in trauma patients after PEG placement is warranted
  - Including objective measurements of early EN (additional calories consumed, BMI, etc.)

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