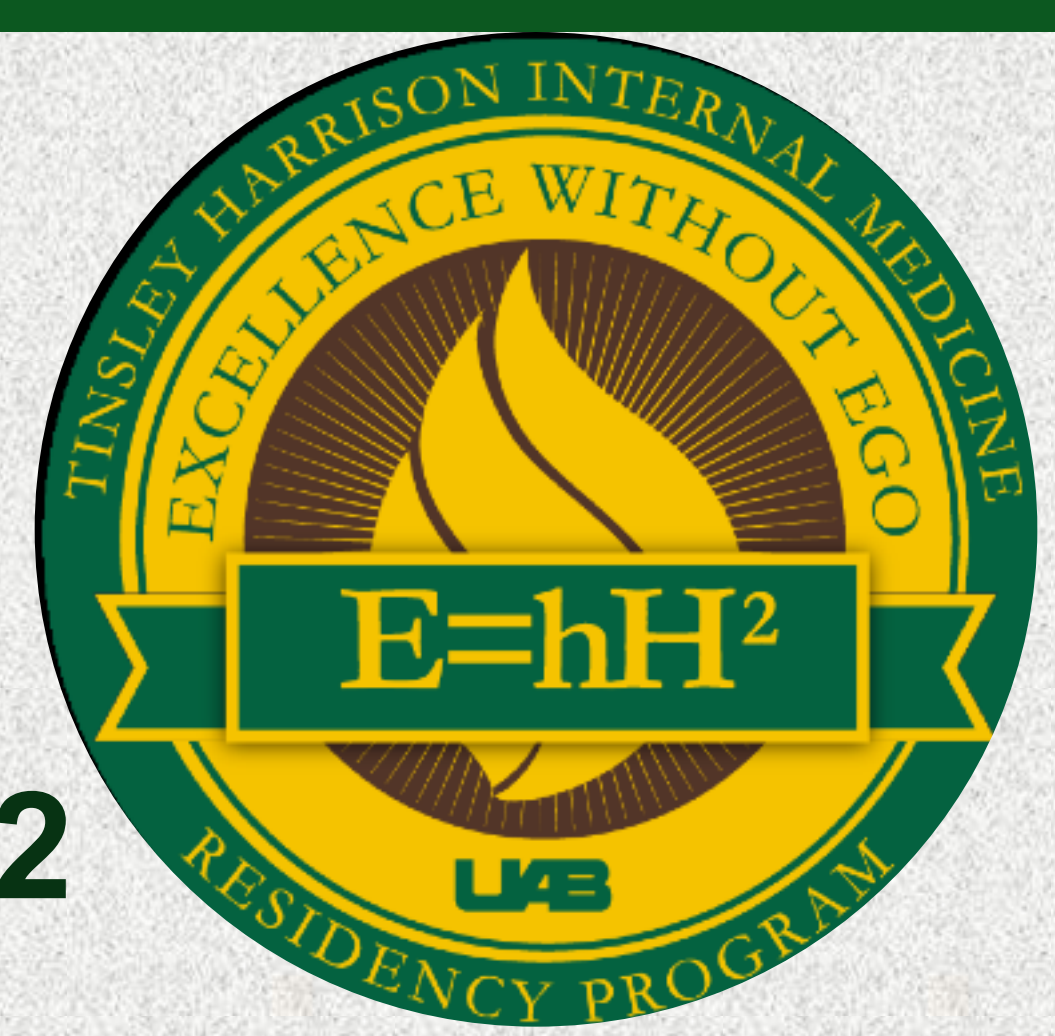


The Impact of Enteral Tube Placement in Patients Presenting with Esophageal Variceal Bleeding



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Introduction

- Enteral tube (ET) placement in patients with gastrointestinal bleeding from esophageal varices is commonly approached with caution
- Our study examines the frequency and impact of ET placement in patients presenting with esophageal variceal bleeding.

Methods

- Retrospective review study
- **Cohort:**
 - 87 patients at our institution
 - Patients presenting with esophageal variceal bleeding and undergoing an EGD
 - May 2017 to September 2021
- **Data:**
 - Patient demographics
 - Co-comorbidities, liver cirrhosis etiology, beta-blocker use, and ET placement
- **Outcomes:**
 - Length of stay (LOS) in days in the hospital
 - LOS in intensive care unit (ICU)
 - Days of intubation
 - Packed red blood cell transfusion requirement
 - Patient mortality
- **Statistics:**
 - Mean \pm standard deviation (SD)
 - Adjusted mean calculated for beta-blocker use, hypertension (HTN), Diabetes Mellitus (DM), and Hepatocellular Carcinoma (HCC)
 - A Mann-Whitney U-test, Welch t-test, and a heteroscedastic linear model were used to obtain the odds ratio (OR), confidence interval (CI), and calculate statistical significance (p-value<0.05)

Outcomes of ET Placement

Outcomes:	No Placement (N=63)	Enteral Tube (N=24)	p-value
Death	9 (14.29%)	13 (54.17%)	0.0129
Transfusion	46 (73.02%)	23 (95.83%)	0.1004
Hospital LOS			
Mean \pm SD	7.75 \pm 5.73	24.54 \pm 24.59	0.0029 ^W
Adjusted Mean	8.29	24.14	0.0054 ^H
ICU LOS			
Mean \pm SD	3.86 \pm 4.31	17.33 \pm 24.19	0.0122 ^W
Adjusted Mean	4.22	17.25	0.0177 ^H
Intubation LOS			
Mean \pm SD	1.60 \pm 2.32	6.04 \pm 5.42	0.0006 ^W
Adjusted Mean	1.75	5.96	0.0014 ^H

* Adjusted for age, gender, race, MELD, beta-blocker use, and history of HTN, DM, and HCC
H: p-value from heteroscedastic linear models
W: p-value based on Welch t-test

Results

- Our cohort consisted of 87 patients:
 - 69% male, 84% white, average age of 56.0 \pm 10.6, Body Mass Index (BMI) 27.4 \pm 7.1, Model for End Stage Liver Disease (MELD-Na) 20.5 \pm 9.0
 - 84% were treated with esophageal variceal banding
 - 32% had prophylactic beta-blocker use
- Compared to patients without ET placement (N=63), patients with ET placement (N=24) had:
 - Increased transfusion requirements (95.8% vs 73.0%, [OR 6.59, 95% CI 0.70, 62.42, p-value 0.10]
 - Higher mortality (54.2% vs 14.3%), [OR 6.67, 95% CI: 1.50, 29.77, p-value 0.01]
 - Mean LOS in the hospital and ICU and days of intubation were also higher among patients with ET placement (8.29 vs 24.14 LOS in the hospital, 4.22 vs 17.25 LOS in the ICU, 5.96 vs 1.75 days of intubation) with statistical significance, all p<0.05

Discussion

- Our study shows that ET placements in patients with esophageal variceal bleeding is associated with prolonged hospitalization, intubation, and ICU stay with higher transfusion requirements
- Our study also indicates that there is a concern for causality from ET placement that can be related to tube trauma or negative pressure caused by intermittent suctioning that can exacerbate bleeding and lead to worse outcomes
- Further studies are needed to determine the safety of ET placement in this patient population.

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