



Western Surgical Association 2020 Annual Meeting

Monday, November 9, 2020
4:00pm – 6:15pm Pacific Time
– Virtual Meeting --

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P 10. IS NUTRITIONAL STATUS ASSOCIATED WITH PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (PEG) COMPLICATIONS IN TRAUMA PATIENTS?

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Background: PEG tubes are frequently placed to facilitate nutritional support in severely injured trauma patients. PEG-related complications are believed to be increased in malnourished patients, yet optimal nutritional status prior to placement has not been defined. Additionally, complications of PEG tubes have been reported to range from 20 - 30% in all patients. We sought to identify whether nutritional status at the time of placement was associated with PEG-related complications in trauma patients and to examine the PEG-related complication rate in this patient group.

Methods: The trauma registry at a Level I trauma center was used to identify all adult trauma patients who had PEG placement by critical care/trauma surgeons, between 1/1/2015-12/31/2019. Data included demographics, Hgb A1C, ISS, ventilator days, ICU and hospital LOS, PEG-related complications, and outcomes. Pre-procedure albumin (ALB) and prealbumin (PALB) levels and post procedure PALB levels were also included. PEG-related complications included leak, infection, or dislodgement. Patients without PEG complications (NO COMP) were compared to those who developed complications (COMP).

Results: During the study period, 16,740 trauma patients were admitted; 218 had PEG placed. PEG patients were severely injured with a mean ISS of 22; 28 (13%) had a complication. The majority (19) were due to PEG dislodgement with the remainder (9) consisting of leak and/or infection. The NO COMP and COMP groups did not differ by gender, Hgb A1C, ISS, ventilator days, hospital or ICU LOS or outcomes, although age (48 ± 21 yrs NO COMP vs 56 ± 18 yrs COMP, $p = 0.04$) and BMI ($27 \text{ kg/m}^2 \pm 6$ NO COMP vs $29 \text{ kg/m}^2 \pm 5$ COMP, $p = 0.04$) were higher in the COMP group. No patients died due to PEG-related complications. Pre-procedure ALB and PALB were similar between groups, however, post-procedure PALB was lower (15 ± 7 mg/dl NO COMP vs 12 ± 7 mg/dl COMP, $p = 0.04$) in the group experiencing complications. Additionally, in the COMP group, PALB decreased post-PEG but did not change in the NO COMP group ($p = 0.02$). Stratification by PALB level prior to placement also did not correlate with the development of complications.

Conclusion: PEG tube complications in trauma patients occur much less frequently than reported in other patient populations. Pre-procedure nutritional markers do not correlate with the development of complications. However, a decrease in PALB after PEG placement is associated with the development of PEG-related complications.