

Effect of Hospital Teaching Status on Percutaneous Endoscopic Gastrostomy Tube Placement in Ascites Patients: A Population Based Study

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Background

Ascites is viewed as a relative and often absolute contraindication to the insertion of a percutaneous endoscopic gastrostomy (PEG) tube. Nonetheless, PEG tube placement may be required in certain circumstances to ensure proper nutrition. This study aims to assess teaching versus nonteaching hospital inpatient outcomes in PEG tube placement in ascites patients.

Methods

Cases with ascites and associated procedure of PEG tube placement were identified from the 2001-2014 National Inpatient Sample. Baseline characteristics were analyzed. Teaching hospital admissions were propensity score matched 1:1 against controls of nonteaching admissions across clinical covariates. Primary outcomes of complications rates of pneumonia, respiratory failure, shock, peritonitis, and blood transfusion were assessed with adjusted multivariable logistic regression. Secondary outcomes of mortality, total charges, and length of stay (LOS) were examined via multivariable regression.

Results

A total 15,251 cases of PEG tube placement in ascites were identified for teaching hospitals versus 9,305 for nonteaching. Teaching hospitals had a higher rate of PEG tube placement than nonteaching hospitals (0.94% vs 0.73%, OR: 1.28, 95% CI 1.18 - 1.4, $P < 0.001$). Post propensity match, teaching hospitals had lower complication rates of pneumonia (aOR: 0.78, 95% CI 0.65 - 0.93, $P = 0.006$), respiratory failure (aOR: 0.83, 95% CI 0.7 - 0.98, $P = 0.03$), blood transfusion (aOR: 0.78, 95% CI 0.65 - 0.93, $P = 0.007$), and shock (aOR: 0.83, 95% CI 0.7 - 1, $P = 0.046$). There was no significant difference in rates of peritonitis, overall mortality, disposition, or total charges. Teaching hospitals had a higher median LOS 23 vs 22 days, aIRR: 1.13, 95% CI 1.04-1.21, $P = 0.002$).

Conclusions

PEG tube placement in ascites patients is associated with fewer severe complications at teaching hospitals compared to nonteaching hospitals. Further review is needed to understand the drivers of worse outcomes in nonteaching hospitals in order to ensure consistent care and adherence to best practice.