Predictive Factors for Pre-operative PEG placement: A Novel Screening Tool for Head and Neck Reconstruction

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Purpose: The presentation and definitive surgical treatment of upper aerodigestive maligancies have varying impact on postoperative recovery and return of swallowing function. The authors set out to validate a scoring system to aid in preoperatively determining the need for gastrostomy tube placement.

Materials and Methods: The authors prospectively evaluated all patients undergoing reconstructive surgery for upper aerodigestive defects. The study period was from August 2012 to July 2013 ???. Patients tolerating oral diet only, without preoperative gastrostomies, were included for study. Seven parameters were employed in the assessment system: 1) body mass index, 2) Pre-Albumin, 3) Albumin, 4) Smoking history, 5) co-morbidities (including CAD, COPD and DM), 6) Age, and 7) use of microvascular reconstruction. Each parameter ranged from 0 to 2 points. The total score obtained for each patient was correlated with post-operative PEG placement to determine the validity.

Results: Of the 21 patients, 10 patients received a postoperative gastrostomy. Of the 10 patients who did receive a postoperative PEG, only one patient received a score of less than 3. A score of 3 or greater was determined to have a sensitivity of 90% and specificity of 64% for PEG placement during the hospital stay.

Conclusions: Head and neck reconstruction requires a coordinated multidisciplinary treatment approach to achieve a successful functional result. Nutritional optimization is paramount to success. With the use of the pre-operative scoring system designed in this study, practitioners can better assess which patient will likely require surgical gastrostomy placement pre-operatively. Placement of PEG allows optimizing of nutrition in the pre-operative and immediate post-operative period. Our scoring system is designed to categorize this group of patients pre-operatively in order to facilitate a favorable outcome and to allow their healing to progress without delays in order to get them to chemotherapy and radiation sooner.