

FEEDING TUBE PREVALENCE AFTER TRANSORAL SURGERY FOR OROPHARYNGEAL CANCER

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INTRODUCTION

- In the last decade, transoral surgical approaches have gained popularity in treating oropharyngeal squamous cell carcinoma (SCCa).¹
- Expected functional outcomes, in particular swallowing dysfunction, are important considerations in treatment decisions.²
- In this study, we aim to describe the prevalence of swallowing dysfunction following transoral surgery and adjuvant therapy, as measured by use of a feeding tube.

MATERIALS AND METHODS

- Retrospective review from April 2010 through March 2019 on patients who underwent transoral surgery for oropharyngeal SCCa at our institution, with at least 6 months of f/u.
- Feeding tube management
 - Dobhoff tubes placed at discretion of surgeon in the immediate postoperative period
 - Tubes removed once patients were comfortably and safely swallowing at least a full liquid diet
 - Gastrostomy tubes placed at discretion of radiation oncologists prior to or during adjuvant therapy
 - Formal evaluation by Speech and Language Pathologist performed after adjuvant therapy
 - Gastrostomy tubes removed upon resumption of oral nutrition
- Statistical analysis:
 - Wilcoxon Two-Sample test for analysis of time to feeding tube removal
 - Cox proportional hazard models to analyze factors associated with overall feeding tube duration

RESULTS

- 174 patients were treated with transoral surgery + neck dissection.
- Initial postoperative and total feeding tube duration significantly prolonged in females, smokers, HPV-negative, larger tumors, and those that required adjuvant chemoRT

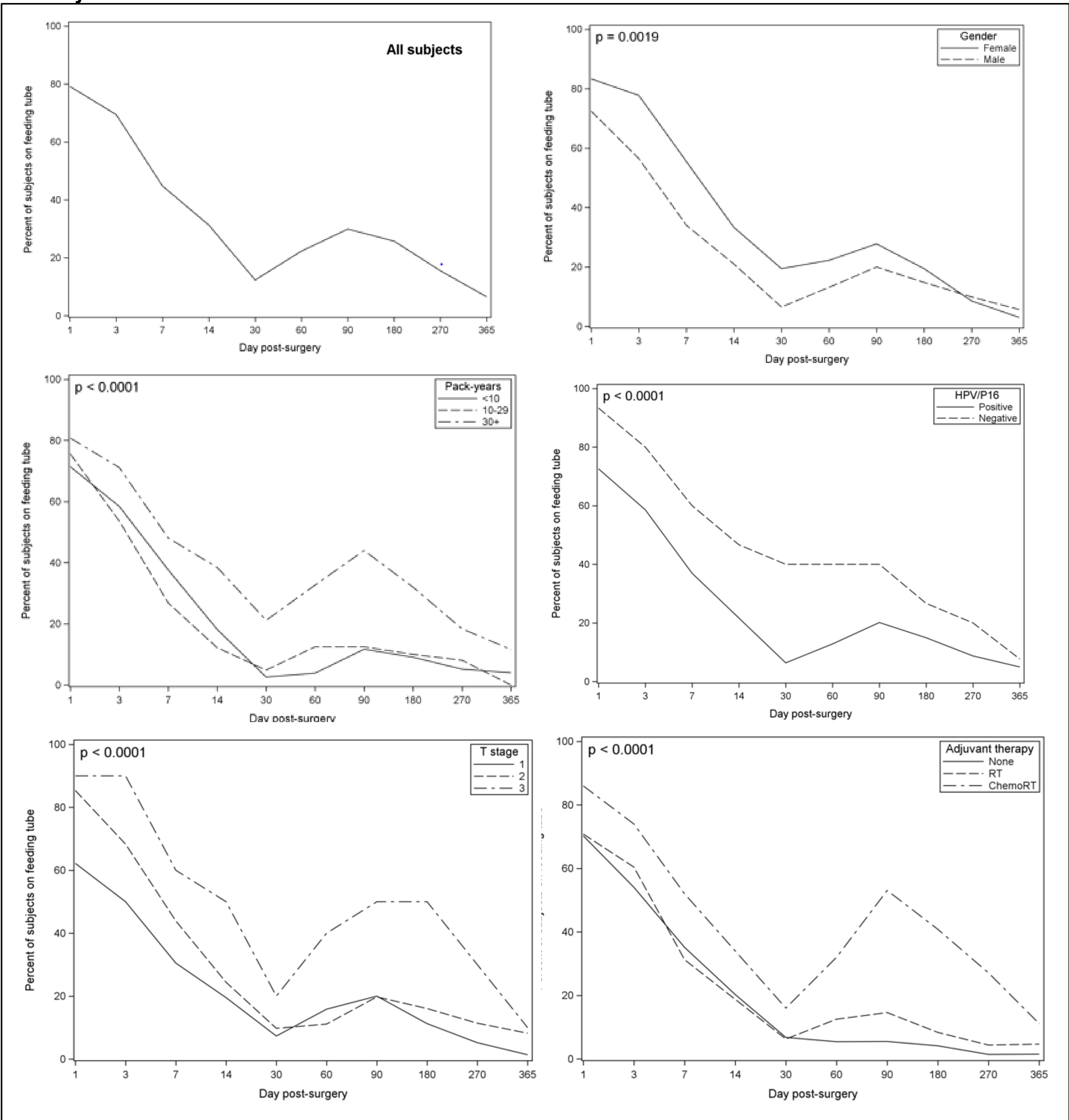


Figure 1: prevalence of patients with a feeding tube, by day after surgery. Note the scale of the x-axis.

Factor		n	Median days	p-value
Gender	Male	138	3.0	0.0071
	Female	36	9.5	
Age	<65 yrs	130	3.5	0.28
	≥65 yrs	44	6.0	
Smoking history	< 10 pack-yr	77	3.0	0.032
	10-29 pack-yr	41	3.0	
	≥30 pack-yr	52	4.5	
HPV / p16 status	Positive	157	4.0	0.0079
	Negative	15	13.0	
Tumor site	Tonsil	113	4.0	0.99
	Tongue base	40	3.5	
	Other	21	5.0	
T-stage	1	82	2.5	0.0045
	2	82	4.0	
	3	10	13.5	
Adjuvant therapy	None	74	3.0	0.052
	Radiation	48	3.0	
	Chemo-radiation	50	7.0	

Table 1. Risk factors for duration of initial postoperative (Dobhoff) feeding tubes

Factor	p-value	Hazard Ratio
Female	0.0019	1.38 (1.13, 1.69)
≥65 yrs	0.24	
≥30 pack-yr	<0.0001	1.79 (1.46, 2.19)
HPV/p16-positive	<0.0001	0.57 (0.44, 0.73)
Tumor site	0.82	
T1 stage	<0.0001	1.33 (1.10, 1.62)
T2 stage		2.19 (1.60, 3.00)
Radiation	<0.0001	1.13 (0.89, 1.45)
Chemo-radiation		2.07 (1.68, 2.55)

Table 2. Risk factors for total duration of feeding tubes, including postoperative period, adjuvant therapy, and subsequent follow-up

DISCUSSION

- Presence of a feeding tube is a major determinant of quality of life for head and neck cancer survivors³
- Cure rates for HPV-related oropharyngeal SCCa are excellent for both surgery ± adjuvant therapy and definitive radiation ± chemotherapy.^{2,4}
- Treatment decisions must take into account expectations for detriments to quality of life
- For patients who are candidates for transoral surgery, these data provide insight into one of the more common questions providers are asked: “Will I need a feeding tube, and if so, for how long?”

CONCLUSIONS

- Feeding tube prevalence is prolonged in females, smokers, HPV-negative disease, and larger (T3) tumors.
- About half of patients undergoing adjuvant chemoradiation required feeding tubes, but very few of those undergoing adjuvant radiation.
- By one year, very few patients have feeding tubes, regardless of therapy.

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