

THE EFFICACY OF ESOPHAGEAL STENTING IN MANAGING ESOPHAGEAL TUMOR PERFORATION: A RETROSPECTIVE STUDY

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OBJECTIVE

To determine the effectiveness of esophageal stenting (ES) in managing esophageal tumor perforation at different stages of the disease and long-term outcomes.

METHODS

This study was conducted at Shaukat Khanum Memorial Cancer Hospital and Research Center in Peshawar, Pakistan 1st, 2016, to December 31st , 2021, were obtained between October and December 2024.

This retrospective cohort study reviewed a total of 600 patients, that had presented from 2016 to 2021, with esophageal tumor perforation. Eighty patients who fulfill the inclusion criteria and underwent esophageal stenting were enrolled in the study.

Data regarding demographic, tumor characteristics, treatment history and survival status were collected from hospital electronic system.

SPSS-25 was used for analysis purpose. The chi-square test was employed to determine statistical significance (p s 0.05).

RESULTS

The mean age of patients was 46.98±11.62 years and most of the patients were male 45(56.3%). Squamous cell carcinoma was the most prevalent histological type, accounting for 74(92.5%) of cases. Advanced stage disease was observed in the majority of cases, with T3 at 48(60.5%) and T4 at 15(18.8%).Additionally, 34(42.5%) exhibited nodal involvement (N1 and N2 each) and 23(28.7%) had metastatic. The median stent insertion till the study period was 83 days, with a range from 1 day to 7 years. Survival status was suboptimal, with 76(95%) deceased 4(5%) surviving. Kaplan-Meier analysis demonstrates the median survival of 200 days.

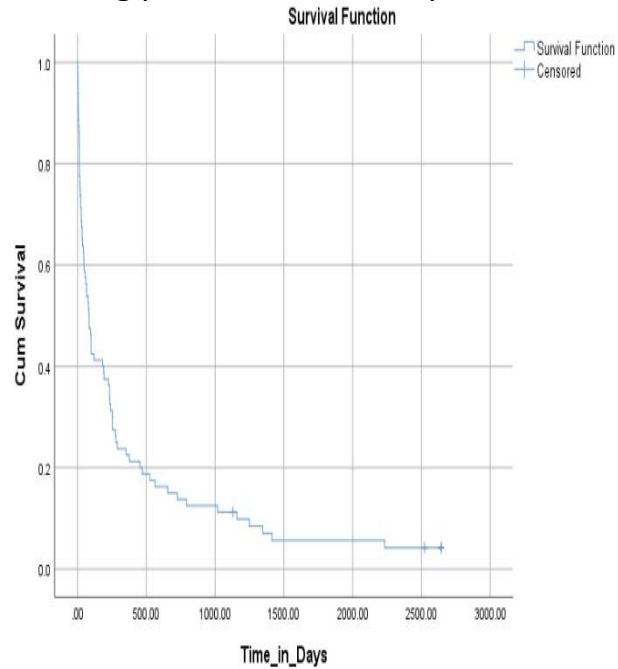
TABLE 2: T-STAGE AND NODAL INVOLVEMENT ASSOCIATION WITH SURVIVAL

Variable	Category	Alive	Death	p Value
T Stage	1	0 (0.0%)	1 (1.3%)	0.967
	2	1 (25.0%)	15 (19.7%)	
	3	2 (50.0%)	46 (60.5%)	
	4	1 (25.0%)	14 (18.4%)	
	Total	4 (100.0%)	76 (100.0%)	
Nodal Involvement	0	1 (25.0%)	11 (14.5%)	0.726
	1	2 (50.0%)	32 (42.1%)	
	2	1 (25.0%)	33 (43.4%)	
	Total	4 (100.0%)	76 (100.0%)	
Metastasis	0	3 (75.0%)	54 (71.1%)	0.675
	1	1 (25.0%)	22 (28.9%)	
	Total	4 (100.0%)	76 (100.0%)	
Histology	Adenocarcinoma	0 (0.0%)	4 (5.3%)	0.843
	Squamous Cell Carcinoma	4 (100.0%)	70 (92.1%)	
	Other Types	0 (0.0%)	2 (2.6%)	
	Total	4 (100.0%)	76 (100.0%)	

TABLE 1: PATIENTS CHARATERISTICS, HISTOLOGY, STAGING, TREATMENT AND OUTCOME

HISTOLOGY		n(%)	Total
Squamous Cell Carcinoma	Squamous Cell Carcinoma	67(83.8%)	74(92.5%)
	Moderately Differentiated Squamous Cell Carcinoma	5(6.3%)	
	Well-Differentiated Squamous Cell Carcinoma	2(2.5%)	
Adenocarcinoma	Adenocarcinoma	3(3.8%)	4(5%)
	Poorly Differentiated Adenocarcinoma	1(1.3%)	
Other Types	High-Grade Neuroendocrine Carcinoma	1(1.3%)	2(2.5%)
	Mucoepidermoid Carcinoma & GOJ Tumor	1(1.3%)	
STAGING			
T	T1	1(1.3%)	
	T2	16(20%)	
	T3	48(60%)	
	T4	15(18.8%)	
N	N0	12(15%)	
	N1	34(42.5%)	
	N2	34(42.5%)	
M	M0	57(71.3%)	
	M1	23(28.7%)	
CHEMO-RADIO THERAPIES			
No Chemo-Radio Therapy		11(13.8%)	
Chemo + Radio Therapies		37(46.3%)	
Only Chemo Therapy		32(40%)	
Median duration of stent insertion to end date of the study		83 days (min=1 day, max=7.24 years)	
SURVIVAL STATUS			
Alive		4(5%)	
Dead		76(95%)	

Kaplan-Meier survival analysis of esophageal stenting patients for tumor perforation



CONCLUSION

Esophageal stenting serves as an effective palliative intervention for managing tumor-induced esophageal perforation, particularly in patients with advanced disease, and prolongs the survival time.

