PATIENT-PERCEIVED SWALLOWING FUNCTIONAL OUTCOMES FOLLOWING SALVAGE

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INTRODUCTION

Traditionally, oropharyngeal squamous carcinoma (OPSC) has been treated with non-surgical (irradiation or chemoradiation) or open surgical techniques, usually associated with high morbidity rates. Most patients who underwent TORS ± adjuvant therapy reported a return to baseline QOL and swallow function by 6 to 12 months post treatment. Several studies demonstrated superior QOL and swallowing outcomes when compared with primary chemoradiation or open approaches.

OBJECTIVE

The aim of the study is to evaluate changes in patient-perceived swallowing function over time following TORS (salvage surgery) for T1-3 oropharyngeal squamous carcinoma.

METHODS

- Observational cross-sectional study

- 39 patients (28.8%) Recorrent T1-T3 from the 135 patients with OPSC who underwent TORS assisted resection during two years

Instruments Swallowing function scoring

- MD Anderson Dysphagia Inventory (MDADI) * Portuguese validation

20 questions: 1 overall QOL aspects and 3 domains emotional E, physical P and functional F. Likert scale 5 points

Each subscale was multiplied by 20 = Zero (extremely low functioning) to 100 (high functioning)

- The American Speech–Language Hearing Association National Outcomes Measurements System Swallowing Scale (ASHA NOMS scale): dietary limitations of the patient

Level 1	Individual is not able to swallow anything safely by mouth. All nutrition and hydration is received through nonoral means (e.g., nasogastric tube, PEG)
Level	Individual is not able to swallow safely by mouth for nutrition and hydration but may take some consistency with consistent maximal cues in therapy only. Alternative method of feeding is required
Level 3	Alternative method of feeding required as individual takes less than 50 % of nutrition and hydration by mouth, and/or swallowing is safe with consi stent use of moderate cues to use compensatory strategies and/or requires maximum diet restrictions
Level 4	Swallowing is safe but usually requires moderate cues to use compensatory strategies, and/or individual has moderate diet restrictions and/or still requires tube feedings and/or oral supplements
Level 5	Swallowing is safe with minimal diet restrictions and/or occasionally requires minimal cueing to use compensatory strategies. May occasionally self cue. All nutrition and hydration needs are met by mouth at mealtime
Level 6	Swallowing is safe and individual eats and drinks independently and may rarely require minimal cueing. Usually self cues when difficulty occurs. May need to avoid specific food items (e.g., popcorn and nuts), or requires additional time (due to dysphagia)
Level 7	Individual's ability to eat independently is not limited by swallow function. Swallowing would be safe and efficient for all consistencies. Compensatory strategies are effectively used when needed
PEG - percutaneous endoscopic gastrostomy	

RESULTS

Table 1. Clinical characteristics of 39 patients.

Characteristic Patients	n	%
Sex		
Female	11	28,20
Male	28	71,79
Age		
Mean	66 years	
Extreme	48-78 years	
Salvage clinical stage		
rT1	16	41,02
rT2	17	43,60
rT3	6	15,38
Neck dissection		0
Yes	30	76,92
No	9	23,07
Primary treatment		
Radiotherapy	29	74,35
Chemoradiation	10	25,64
Postoperative complications		
Yes	11	28,20
No	28	71,79
Persistence of disease/ recurrence	6	15,38
Yes	33	84,61
No		
Feeding tubes in POI	18	46,15
Mean	16 days	
Extreme	07-30 days	
Tracheostomy in POI	7	17,94
Mean	14 days	
Extreme	10-41 days	
Follow-up		
Mean	16 months	
Extreme	03-27 months	

Figure 1. MD Anderson Dysphagia Inventory results are illustrated, including (A) total scores, (B) global assessment scores, (C) emotional subscores, (D) functional subscores, (E) physical subscores and (F) mean of the results.

Table 2. The patients classification according to the ASHA NOMS swallowing scale

	n	%
Level 1	0	0
Level 2	0	0
Level 3	0	0
Level 4	12	30,76
Level 5	16	41,02
Level 6	7	17,94
Level 7	4	10,25

Table 3. Statistical Analysis performed to help identify factors predictive of poor outcome

Variable	Emocional		Functional		Phisical		Global		Total	
	Média (DP)	p	Média (DP)	p	Média (DP)	p	Média (DP)	p	Média (DP)	p
Age										
<65 years	90,15 (18,27)	0,758	84,73 (18,30)	0,845	78,18 (19,14)	0,935	86,36 (29,85)	0,961	84,86 (18,62)	0,980
>= 65 years	91,96 (17,76)		83,53 (19,60)		78,68 (17,80)		85,88 (31,44)		85,01 (19,94)	
Site										
Oral Cavity	87,58 (21,09)	0,184	88,55 (19,57)	0,098	74,89 (18,07)	0,177	90,00 (26,00)	0,372	85,25 (19,93)	0,902
Others	95,29 (11,67)		78,59 (16,18)		82,94 (18,16)		81,18 (34,98)		84,50 (17,10)	
Primary Treatment										
Surgery	92,22 (13,51)	0,839	78,33 (17,18)	0,386	73,54 (16,11)	0,525	73,33 (39,39)	0,170	79,36 (18,21)	0,392
Radiotherapy	88,18 (22,28)		84,73 (20,92)		79,09 (21,43)		87,27 (28,67)		84,82 (21,78)	
Chemoradiation	91,88 (18,26)		88,25 (18,03)		81,56 (18,00)		95,00 (20,00)		89,17 (16,27)	
Margins										
Committed	95,84 (6,31)	0,815	75,00 (20,75)	0,068	75,63 (22,77)	0,677	60,00 (46,19)	0,141	76,62 (23,29)	0,518
Free after enlargement	91,23 (15,36)		91,16 (13,30)		76,32 (14,54)		92,63 (22,32)		87,83 (13,85)	
Free	89,38 (22,48)		78,25 (21,41)		81,56 (21,79)		85,00 (32,25)		83,55 (22,32)	
Tracheostomy										
(Preview)	85,19 (22,80)	0,275	80,00 (25,38)	0,447	66,94 (14,88)	0,031	73,33 (40,00)	0,148	76,37 (23,47)	0,115
Yes	92,67 (16,13)		85,47 (16,43)		81,83 (18,05)		90,00 (26,13)		87,49 (16,35)	
No										
Complications										
Yes	70,00 (29,44)	0,011	73,00 (27,98)	0,208	63,13 (26,80)	0,078	65,00 (41,23)	0,141	67,78 (30,89)	0,049
No	93,33 (14,89)		85,50 (17,38)		80,14 (16,77)		88,57 (28,40)		86,88 (16,13)	
PEG										
Yes	92,84 (14,70)	0,325	86,22 (18,61)	0,317	78,98 (16,75)	0,770	88,15 (28,96)	0,543	86,55 (16,78)	0,481
No	86,67 (23,66)		79,67 (18,63)		77,08 (22,23)		81,67 (33,53)		81,27 (22,29)	
TNM										
T1	94,58 (15,10)		82,75 (19,31)		82,66 (17,90)		85,00 (32,25)		86,25 (19,31)	
T2	87,84 (20,21)	0,562	81,88 (19,65)	0,332	75,88 (19,99)	0,483	82,35 (33,08)	0,470	81,99 (20,36)	0,646
T3	90,00 (18,74)		94,67 (11,22)		74,17 (14,46)		100,00 (0,0)		89,71 (9,81)	
									84,92 (18,51)	

CONCLUSION

The data suggest that salvage TORS treatment was able to maintain the physiology of swallowing, thus ensuring good quality of life levels for the population studied.

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