



Comorbidity measurement in patients with oral or oropharyngeal squamous cell carcinoma

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INTRODUCTION

The evaluation of cancer patients can be affected by many factors. They often have other diseases or medical conditions in addition to the cancer. These conditions are referred to as comorbidities. They can influence the treatment option, the rate of complications, the outcome and can confound the survival analysis.

OBJECTIVE

The objective of this study was to measure comorbidity in patients with oral or oropharyngeal squamous cell carcinoma.

PATIENTS AND METHODS

One hundred sixteen adult patients were evaluated on a prospective cohort study. They were treated for a newly diagnosed oral or oropharyngeal squamous cell carcinoma from January 1996 to December 2007. We measured comorbidity illness applying the following validated scales: the Cumulative Illness Rating Scale (CIRS); the Kaplan-Feinstein Classification (KFC); the Charlson Index; the Index of Co-existent Disease (ICED); the Adult Comorbidity Evaluation – 27 (ACE-27); the Alcohol-tobacco-related Comorbidities Index (ATC); and the Washington University Head and Neck Comorbidity Index (WUHNCI). The univariate dichotomous data was performed via 2 x 2 table and analyzed by Chi-square test. Continuous data were analyzed using the difference between averages and their standard deviations. For all variables, 95% confidence interval was taken as significant.

RESULTS

From the hundred sixteen adult patients studied, eighty-seven (75%) were males and the mean age was 65.4. the most frequently site of the primary tumor was tongue followed by retromolar and floor of the mouth. After 4 years of follow-up the mortality rate was 47,4% (55). Patients with TNM stage T3/T4 and with nodal involvement showed both increased risk of death of 41%. Patients with high values in ACE-27 and WUHNCI showed increased absolute risk of death in general. Patients who have high indexes on CIRS, KFC, ACE-27 and WUHNCI had increased risk of death due to noncancer cause. Only the WUHNCI presented significant difference capable of predicting cancer-related mortality.

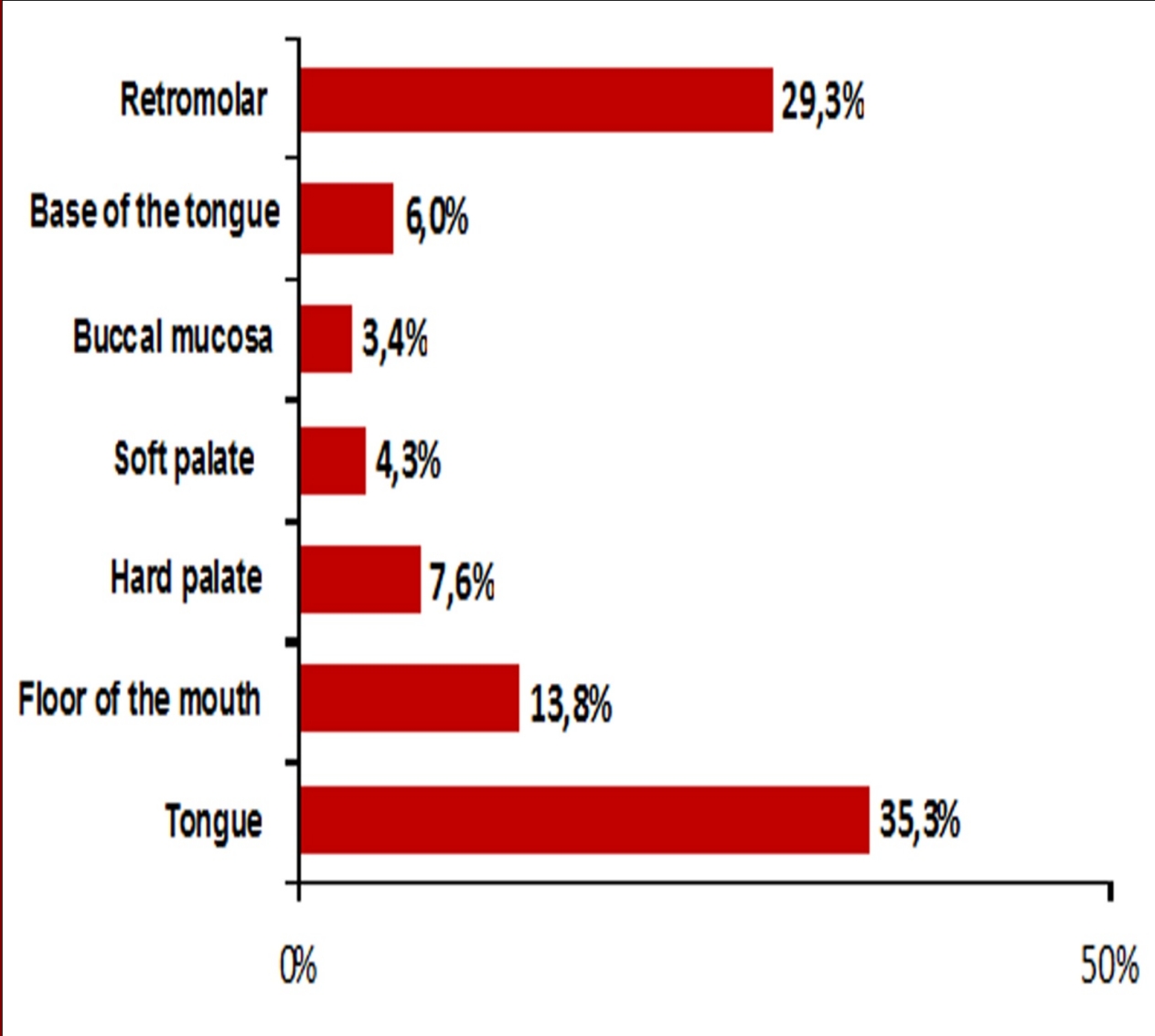


Figure 1 – Sites of the primary tumor.

Table 1 - Correlations between gender, age, tumor staging and mortality.

Variable	Deaths	Alives	p
Gender			
Male	38	49	0,16
Female	17	12	
Age			
≤65	26	26	0,61
>65	29	35	
T Stage			
T1/T2	15	42	<0,001
T3/T4	40	19	
N Stage			
N-	17	44	<0,001
N+	38	17	

Table 2 - Absolute data concerning indexes of comorbidity (DDOC – Death due other causes; DDCA –Death due cancer; ARI – Absolute risk increasing; NS – Not significant)

Index	Alives n=61	Deaths n=55	ARI	DDOC n=17	ARI	DDCA n=38	ARI
CIRS							
≤2	45	33	NS	7	33%	26	NS
>2	16	22		10		12	
KFC							
≤2	21	10	NS	2	23%	8	NS
>2	40	45		15		30	
ICED							
0	27	17	NS	4	NS	13	NS
≥1	34	38		13		25	
Charlson							
≤5	60	52	NS	17	NS	35	NS
>5	1	3		0		3	
ATC							
0	33	22	NS	6	NS	16	NS
≥1	28	33		11		22	
ACE-27							
≤2	45	27	25%	5	44%	22	NS
>2	16	28		12		16	
WUHNCI							
0	42	21	31%	3	51%	18	21%
≥1	19	34		14		20	

CONCLUSION

Comorbidity is an independent prognostic factor in patients with oral or oropharyngeal cancer. Patients with high values in ACE-27 and WUHNCI showed increased absolute risk of death in general. Only the WUHNCI presented significant difference capable of predicting cancer-related mortality. Patients who have high indexes on CIRS, KFC, ACE-27 and WUHNCI had increased risk of death due noncancer causes.