A.C.Camargo Cancer Center
Centro Integrado de Diagnóstico, Tratamento, Ensino e Pesquisa

Rare cancer of the salivary glands in Head and Neck in Brazil

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1. BACKGROUND

Salivary gland carcinomas are a special group among head and neck carcinomas, because of its relatively rare occurrence.[1] Also, the most important risk factors for head and neck cancer tobacco and alcohol use[2], are less clearly associated to salivary gland tumors. In this analysis we describe the distribution of rare cancers in salivary glands of the head and neck in a cancer center and evaluate mortality in Brazil.

2. METHODS

The definition of RARECAREnet for the classification of salivary gland cancers was applied.[3]
The source of the data was Hospital Cancer Registries (HCR) whose data are available at the National Institute of Cancer José de Alencar (INCA) for Brazil; the Oncocentro Foundation of São Paulo (FOSP) for the State of São Paulo.
Deaths from Malignant Neoplasm of the Parotid Gland (C07) and Malignant Neoplasia of Other Major and Unspecified Salivary Glands (C08), according to ICD-10, were extracted from the Mortality Information System.
The frequencies of the cases were described and chi-square was calculated to assess differences in proportions. Mortality rates and Average Annual Percent Change (AAPC) were calculated.

3. RESULTS

Between 2000-2013, 7,428 cases were registered in Brazil, 2,318 in the State of São Paulo, 222 in the ACCamargo Cancer Center (ACCCC).
Most of the cases were classified as Epithelial tumors of major salivary glands, followed by Salivary gland types.
In the ACCC, the proportions of males, patients aged ≥50 years and advanced stages (III/IV) were lower, compared to Brazil and State of São Paulo ($p < 0.01$).
There were 4384 (0.14/100,000) deaths in Brazil, 1193 (0.17/100,000) in the State of São Paulo, 396 (0.21/100,000) in the Municipality of São Paulo. In Brazil, it was observed an increasing of mortality (2.4% per year, $p < 0.01$).

Distribution of cancer of the salivary glands in Head & Neck, by demographic and clinical characteristics. Hospital Cancer Registries. Brazil, State of São Paulo and AC Camargo Cancer Center, 2000-2013.

characteristics	Brazil		State of São Paulo (FOSP)		AC Camargo Cancer Center	
	N	%	N	%	N	%
Gender						
Male	4.084	55,0	1370	59,1	104	46,8
Female	3.344	45,0	948	40,9	118	53,2
Age group (yrs)						
0-19	215	2,9	77	3,3	10	4,5
20-49	2.277	30,7	680	29,3	85	38,3
≥50	4936	66,5	1561	67,3	127	57,2
Residence						
State of São Paulo	-		2152	92,8	190	85,6
City of São Paulo	**-**		**589**	**27,4**	**106**	**55,8**
Ohters Cities of São Paulo State	**-**		**1563**	**72,6**	**84**	**44,2**
Ohters States of Brazil	-		166	7,2	32	14,4
Clinical Stage*						
I	818	11,0	525	22,6	65	29,3
II	873	11,8	321	13,8	25	11,3
III	869	11,7	322	13,9	23	10,4
IV	1945	26,2	900	38,8	76	34,2
X	2002	27,0	157	6,8	27	12,2
Y	527	7,1	93	4,0	6	2,7
Total	**7428**	**100,0**	**2318**	**100,0**	**222**	**100,0**

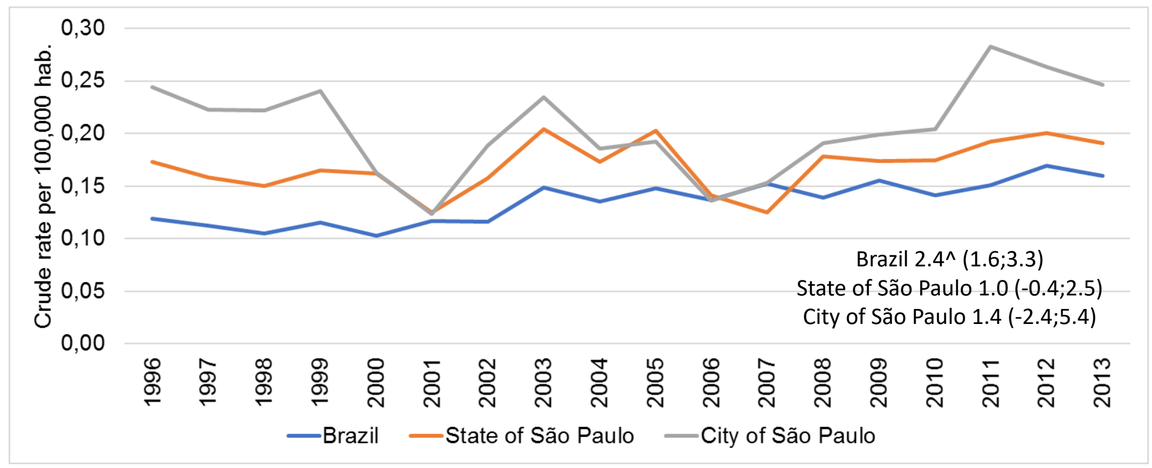
*8 in situ, 386 whithout information

Distribution of cancer of the salivary glands in Head & Neck, by state of residence. Hospital Cancer Registries. Brazil, 2000-2013.

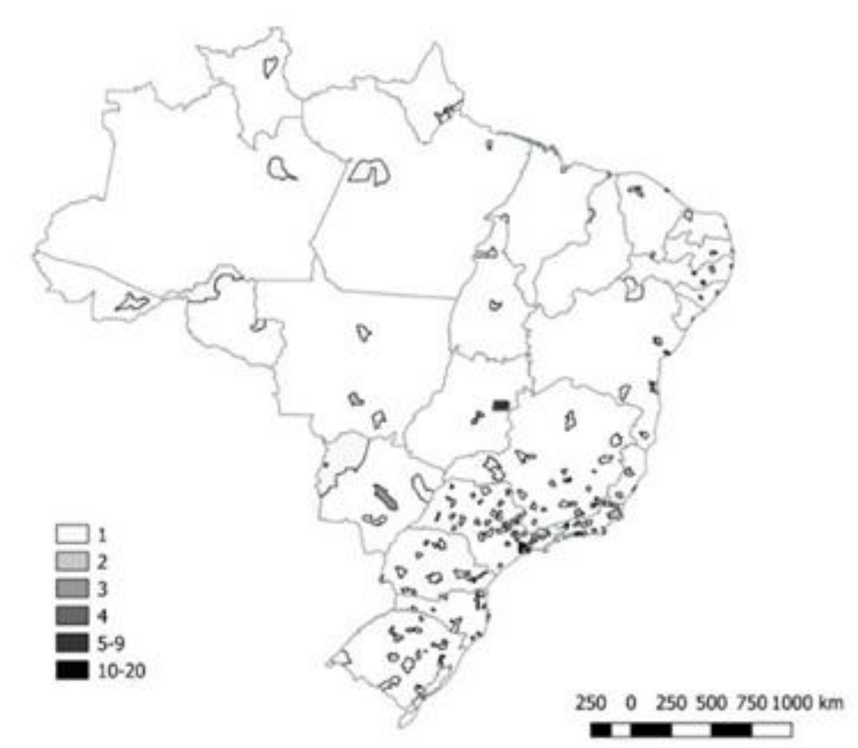
States	N	%
Acre	12	0,2
Alagoas	197	2,7
Amazonas	56	0,8
Amapá	2	0,0
Bahia	425	5,7
Ceará	197	2,7
Distrito Federal	56	0,8
Espírito Santo	167	2,2
Goiás	6	0,1
Maranhão	134	1,8
Minas Gerais	793	10,7
Mato Grosso do Sul	97	1,3
Mato Grosso	72	1,0
Pará	157	2,1
Paraíba	249	3,4
Pernambuco	280	3,8
Piauí	164	2,2
Paraná	351	4,7
Rio de Janeiro	602	8,1
Rio Grande do Norte	212	2,9
Rondônia	4	0,1
Roraima	-	-
Rio Grande do Sul	612	8,2
Santa Catarina	375	5,0
Sergipe	30	0,4
São Paulo	2102	28,3
Tocantins	76	1,0
Brasil	7428	100,0

Distribution of cancer of the salivary glands in Head & Neck, by state of residence. Hospital Cancer Registries. Brazil, State of São Paulo and AC Camargo Cancer Center, 2000-2013.

Cancers	N		
	Brazil	State of São Paulo (FOSP)	AC Camargo Cancer Center
Epithelial Tumours of major salivary glands and salivary gland type tumours	**7.428**	**2.318**	**222**
Epithelial tumours of major salivary glands	4.724	1.325	123
Ductal carcinoma (C7, C8)	70	27	4
Adenocarcinoma NOS (C7, C8)	604	161	7
Salivary gland types tumours of head and neck	2.704	993	99
Adenocarcinoma NOS	894	271	5
Ductal carcinoma	14	0	0



Trend of mortality of salivary glands in Head & Neck cancer, in Brazil, State of São Paulo and City of São Paulo, 1996-2013



Distribution of municipalities by population size and hospitals offering cancer treatment in Brazilian municipalities.

4. CONCLUSION

Salivary gland cancers are rare in Brazil, São Paulo and in Sao Paulo Municipality. Mortality rates were higher in the city of São Paulo nevertheless the increasing occurred only in Brazil as whole. The differences in the age, sex and stage observed at ACCC it is due to the profile of the institution which is specialized for the treatment of head and neck cancers in Brazil.

5. References

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