PANCREATIC ADENOCARCINOMA SCENARIO IN BRAZIL: A CLINICAL-EPIDEMIOLOGICAL STUDY OF 4915 PATIENTS

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PURPOSE

The aim of the study was to evaluate the variables associated with adequate response to treatment of pancreatic adenocarcinoma (PA) at the public health system in Brazil.

METHODS

Data from patients diagnosed as PA registered from 2000 to 2011 were obtained at Integrador system coordinated by Instituto Nacional de Cancer, and from Fundação Oncocentro de São Paulo. Patients without clinical stage information, and with previous cancer or oncological treatment were excluded. Clinical and demographics variables as well as treatment type information were collected. The categorical variables were compared using the chi-square test. Baseline characteristics were included in the univariate logistic regression analysis to identify the association between independent variables and response to treatment with p value <0.05 being considered statistically significant.

RESULTS

Among 4915 Brazilian patients, those with age <65yo (58.8%), male gender (53.1%), caucasian ethnic background (72.4%), living with a partner (67.5%), level of education >8ys (53.2%), no or former alcohol drinking (73.2%) or former tobacco smoking (57.0%), and clinical stage IV (66.6%) were predominant. They were diagnosed mainly from 2006 to 2011 (64.8%) – Table 1. There was statistical difference on adequate response according to treatment type (p<0.001) – Table 2. After stratifying by clinical stages, this difference was observed on III (p=0.022) and IV (p=0.047) stages. Adequate response was associated with being younger than 65yo (OR=1.24, 95% CI=1:06-1:45, p=0.008) or having more than 8ys of study (OR=1.36, 95% CI=1.13-1.64, p=0.001).

CONCLUSION

The two main sources of registry of Brazilian PA patients present certain discrepancy regarding epidemiological data (alcohol and tobacco smoking prevalence). However, they are useful to demonstrate certain variables impacting treatment response, with patients being generally diagnosed with advanced stage, and patients with <65yo and/or ≥ 8ys of study presenting a better chance to respond adequately to cancer treatment.

FUNDING SOURCE

The study was performed with no public or private funding.

Table 1. Baseline demographics and clinical characteristics of study population (n=4915)

Demographic Characteristics	No. of Patients*	%
Age, years		
< 65 years	**2890**	**58.8**
≥ 65 years	2025	41.2
Gender		
Male	**2612**	**53.1**
Female	2303	46.9
Race		
White	**977**	**72.4**
Non-white	373	27.6
Marital status		
No partner	407	32.5
Partner	**844**	**67.5**
Level of education		
Less than 8 years of study	**1798**	**53.2**
8 years of study or more	1581	46,8
Alcohol drinking		
Yes	232	26.8
No or ex-alcohol drinker	**634**	**73.2**
Tobacco smoking		
Yes	401	43.0
No or ex-tobacco smoker	**531**	**57.0**
Year of diagnosis		
2000-2005	1729	35.2
2006-2011	**3186**	**64.8**
Histological type		
Carcinoma	743	15.1
Adenocarcinoma	**4144**	**84.3**
Cystadenocarcinoma	28	0.6
TNM Clinical Stage		
I	307	6.2
II	625	12.7
III	708	14.4
IV	**3275**	**66.6**

*Some totals here are less than totals due to missing values

Table 2. Response classification of pancreatic adenocarcinoma according to the first-course cancer treatment (n=3472*)

Clinical Stage	First course treatment received*	n	n (%)		*p* value
			Adequate response**	Inadequate response***	
Stage I (n= 241)	Surgery	43	**26 (60.5)**	17 (39.5)	0,606
	Surgery + CTX[@] and/or RTX[#]	145	**102 (70.3)**	43 (29.7)	
	RTX	6	**5 (83.3)**	1 (16.7)	
	RTX + CTX	5	**3 (60.0)**	2 (40.0)	
	CTX	18	**10 (55.6)**	8 (44.4)	
	Other therapy	24	**17 (70.8)**	7 (29.2)	
	Total	241	163 (67.6)	78 (32.4)	
Stage II (n= 515)	Surgery	36	18 (50.0)	18 (50.0)	0.167
	Surgery + CTX and/or RTX	359	**219 (61.0)**	140 (39.0)	
	RTX	14	**8 (57.1)**	6 (42.9)	
	RTX + CTX	17	**9 (52.9)**	8 (47.1)	
	CTX	72	32 (44.4)	**40 (55.6)**	
	Other therapy	17	**10 (58.8)**	7 (41.2)	
	Total	515	296 (57.5)	219 (42.5)	
Stage III (n= 562)	Surgery	29	12 (41.4)	**17 (58.6)**	**0.022**
	Surgery + CTX and/or RTX	253	117 (46.2)	**136 (53.8)**	
	RTX	32	**20 (62.5)**	12 (37.5)	
	RTX + CTX	51	20 (39.2)	**31 (60.8)**	
	CTX	176	63 (35.8)	**113 (64.2)**	
	Other therapy	21	5 (23.8)	**16 (76.2)**	
	Total	562	237 (42.2)	325 (57.8)	
Stage IV (n= 2154)	Surgery	86	14 (16.3)	**72 (83.7)**	**0.047**
	Surgery + CTX and/or RTX	691	164 (23.7)	**527 (76.3)**	
	RTX	45	5 (11.1)	**40 (88.9)**	
	RTX + CTX	105	22 (21.0)	**83 (79.0)**	
	CTX	1116	204 (18.3)	**912 (81.7)**	
	Other therapy	111	24 (21.6)	**87 (78.4)**	
	Total	2154	433 (20.1)	1721 (79.9)	
Totals (n= 3472)	Surgery	194	70 (36.0)	**124 (64.0)**	**<0.001**
	Surgery + CTX and/or RTX	1448	602 (41.6)	**846 (58.4)**	
	RTX	97	38 (39.2)	**59 (60.8)**	
	RTX + CTX	178	54 (30.3)	**124 (69.7)**	
	CTX	1382	309 (22.4)	**1073 (77.6)**	
	Other therapy	173	56 (32.4)	**117 (67.6)**	
	Total	3472	1129 (32.5)	2343 (67.5)	

** Some totals here are less than totals due to missing values (1443 patients were excluded because there was no treatment registry);*
*** Adequate response: partial remission, stable disease, and complete response;*
**** Inadequate response: progressive disease, relapsed disease or death*
A p value obtained from Pearson chi-squared test of <0.05 was considered statistically significant.

Projeto Gráfico: Serviço de Edição e Informação Técnico-Científica / INCA