

# SOCIODEMOGRAPHIC AND EPIDEMIOLOGICAL CHARACTERISTICS OF PROSTATECTOMIZED PATIENTS AT THE HOSPITAL AMARAL CARVALHO OF JAÚ

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## ABSTRACT

Prostate cancer (PCa) is one of the types of disease that come with aging, due the increasing life expectancy, becoming a public health problem. PCa is one of the types of disease that come with aging, due the increasing life expectancy, becoming a public health problem. The present study aimed to identify the characteristics sociodemographic, epidemiological and the level of information related to signs and symptoms in men with PCa undergoing radical prostatectomy at the Hospital Amaral Carvalho of Jau. A clinical, prospective and quantitative study was conducted in 42 patients with PCa, attended at Department of Urology, Hospital Amaral Carvalho of Jau. It was observed that this clientele is mostly elderly, predominantly Caucasian, the majority in overweight condition, married with low schooling, predominantly presented some type of chronic disease other than cancer and family history of oncologic disease. PCa, more than any other type, is considered a cancer of the third age, but that has now been diagnosed with precocity in its asymptomatic early stage, due to the development of health programs geared to human health and political prevention; additionally, breaking a cultural taboo of man in relation to care of your health.

**KEYWORDS:** Prostate cancer, prostatectomy, cancer, prostate, nursing.

## 1. INTRODUCTION

Prostate cancer (PCa) has become a public health problem. It is one of the types of diseases that come with aging due the increased life expectancy. However, through screening programs its disease can be detected and treated early. The PCa is an important cause of death among men in Brazil, with a strong socioeconomic impact on the population<sup>1</sup>.

The worldwide incidence of PCa is about 20% and 4.3% of all cancer diagnoses in developed and developing countries respectively, and PCa is more prevalent than other types of cancer in men. Its considered a carcinoma of elderly, with 75% of cases occurring after 65 years old<sup>2</sup>.

This type of visceral neoplasia represents more than 40% of tumors affecting men older than 50 years and its incidence varies with ethnicity and nationality. Countries where the disease occurs more frequently are Brazil and the United States, while Eastern countries have lower incidence. According to the Brazilian Society of Urology, it was estimated that in 2010 there would be about 234,460 new cases/ year and 27,350 deaths/ year in the United States<sup>3</sup>. In Brazil, its incidence rate is six times larger than other countries, with 52/100.000 cases per year, ranking second among the most common cancers among men<sup>4</sup>. The annual incidence rates of PCa point to Goiania, Aracaju, Belo Horizonte and Porto Alegre cities<sup>5</sup>.

The increased incidence is related to better identification of subclinical cases, facilitated by expanding the use of prostate specific antigen (PSA) test. However, the increase in the mortality rate suggests that the increased incidence can not be completely explained due to the induction of increased proportion of new cases diagnosed at earlier stage<sup>6</sup>.

According Rodhen & Averbeck (2010)<sup>7</sup>, the process of care for patients with PCa should be individual, considering characteristics such as life expectancy, therapeutic results throughout the duration of treatment and its consequences, and to observe such aspects as sexual function, urinary incontinence and other side effects. Thus, knowledge of the profile of patients is important for the scientific improvement, knowledge of existing

techniques for diagnostic study and reduced mortality from this cancer.

This study aimed to identify the characteristics sociodemographic, epidemiological and the level of information related to signs and symptoms in men with PCa undergoing radical prostatectomy at the Hospital Amaral Carvalho of Jau.

## 2. MATERIAL AND MÉTHODS

It is about a clinical study, qualitative and prospective character, including 42 patients with PCa undergoing radical prostatectomy by the Urology Service of the Hospital Amaral Carvalho of Jau, attended by the state-owned Unified Health System (UHS), the period from March 29 to May 27, 2011.

The data collection was conducted through direct questionnaires, after signing the consent form, observing education, place, use of tobacco and alcohol, marital status, age, date of diagnosis and date of surgery, symptomatology, Gleason score, family history of cancer among others.

Semi-structured interviews were conducted on the eve of the proposed surgery or during the postoperative period, that last four days, performed at the urology ward in a single encounter, lasting on average 30 minutes. In this type of collection, we tried to establish a conversation with the interviewees addressed around themes that formed the object of research. In the case of this part of the research were focused issues related to the care of human health, symptoms, history of cancer in the family and sexual power condition. The completion of the data and test results was taken by medical records.

The research project which incorporates this work was reviewed by the Ethics Committee on Human Research of the Hospital Amaral Carvalho of Jau, Protocol 015/11, in compliance with the standards of the National Board of Health.

## 3. RESULTS

Relating to the personal characteristics of the clientele at the Department of Urology, Hospital Amaral Carvalho of Jau, 14.2% of respondents were 44-55 years old, from 56 to 65 years 38.2% and 66-75 years is 47.6 %, mean age 63.0 years; 92.8% belong to the white race; only 21.4% were eutrophic and 78.6% are obese; 11.9% were smokers and 42.8% consumed alcohol; 73.8% did not complete primary school and 2.4% are illiterate; 80.8% are married and 95.2% from the State of São Paulo (Table 1).

About the pathological characteristics of the clientele at the Department of Urology, Hospital Amaral Carvalho of Jau, 62.0% had a chronic disease; 64.3% reported family history of cancer; 73.8% had PSA levels below

10 ug / l; 52.3% have prostate weight estimated by ultrasound between 14 to 30g and 47.7% have prostates weighing more than 30g.

**Table 1.** Personal characteristics of the clientele at the Department of Urology, Hospital Amaral Carvalho of Jau.

Characteristics	n	%
<b>Age (years)</b>		
44 – 55	6	14,2
56 – 65	16	38,2
66 – 75	20	47,6
<b>Race</b>		
Caucasian	39	92,9
Blacks	3	7,1
<b>BMI*</b>		
Eutrophic	9	21,5
Overweight	25	59,5
Obesity I	7	16,7
Obesity II	1	2,3
<b>Tobacco use</b>		
Yes	5	11,9
No	35	83,3
Ex	2	4,7
<b>Alcoholic</b>		
Yes	18	42,8
No	24	57,1
<b>Educational level</b>		
Illiterate	1	2,3
1st Grade Complete	5	11,9
1st Grade Incomplete	31	73,8
2nd Grade Complete	3	7,1
2nd Grade Incomplete	1	2,3
3rd Grade Complete	1	2,3
<b>Marital status</b>		
Single	2	4,7
Married	34	80,9
Separated/ divorced	3	7,1
Widower	3	7,1
<b>Home State</b>		
São Paulo	40	95,2
Minas Gerais	2	4,7
<b>Total</b>	<b>42</b>	<b>100</b>

\* Body Mass Index

On the pathological characteristics of the clientele at the Department of Urology, Hospital Amaral Carvalho of Jau, 62.0% had a chronic disease; 64.3% reported family history of cancer; 73.8% had PSA levels below 10 ug / l; 52.3% have prostate weight estimated by ultrasound between 14 to 30g and 47.7% have prostates weighing more than 30g. In the population studied, 2.4% had Gleason score with value = 4; 69.0% Gleason score = 6; 26.2% Gleason score = 7; 2.3% Gleason score = 9; Approximately 88.0% of the surgeries were performed via

the perineal access; 4.8% by the perineal route associated with pelvic lymphadenectomy and 7.2% by retro via pubic; 45.2% reported unsatisfactory penile erection before surgery (Table 2).

**Table 2.** Pathological characteristics of the clientele at the Department of Urology, Hospital Amaral Carvalho of Jau.

Characteristics	n	%
<b>Chronic disease</b>		
Hypertension	18	42,8
Diabetes	3	7,1
Vasculopathy	1	2,3
Others	4	9,5
No	14	33,3
<b>Family history of cancer</b>		
Yes	27	64,2
No	15	35,7
<b>PSA (ug/l)</b>		
< 10	31	73,8
> 10	11	26,1
<b>Prostatic weight (g)</b>		
14 – 20	13	30,9
21 – 30	9	21,4
31 – 40	12	28,5
41 – 50	1	2,3
51 – 60	3	7,1
61 – 70	2	4,7
71 – 80	0	0
81 – 90	1	2,3
91 – 100	0	0
> 100	1	2,3
<b>Gleason's score</b>		
4	1	2,3
6	29	69,0
7	11	26,1
9	1	2,3
<b>Surgery</b>		
Retropubic	3	7,1
Perineal + Linf. pelvic	2	4,7
Perineal	37	88,1
<b>Erectile function</b>		
Satisfactory	23	54,7
Unsatisfactory	19	45,2
<b>Total</b>	<b>42</b>	<b>100</b>

## 4. DISCUSSION

In this study there was a higher concentration of patients in the range 66-75 years. It is hereby confirmed, therefore the data published studies, where according to the National Cancer Institute<sup>5</sup>, PCa is considered a cancer of old age, because most cases in the world occur from 65 years and up obtained in this study 47.6% were

aged over 65 years. The mean of age of this population was 63.0 years. There was also diagnosed with PCa in patients aged less than 65 years. It is believed that this result may reflect the development of health programs geared to health of man and policies for prevention and early diagnosis, this adds up to a cultural break taboo of man in relation to care of their health, with the possible detect cancer at an early, asymptomatic stage. In a study conducted by Dini & Koff (2006)<sup>1</sup> for a period of five years, with 3,056 volunteers aged from 40 years, with a prevalence of PCa in 80 (10.1%) of them. Men diagnosed with PCa were: more younger than 60 years (21.2%), between 60-69 years (46.3%) and 70 (32.5%). The mean age was 65.8 years. Results that are consistent with the literature and our study. Gonçalves *et al.* (2008)<sup>8</sup>, in a study of 78 medical records of patients observed higher concentrations in the range 69-73 years, representing 45% of the sample and 23.57% 63-68 years of age. The remaining amount to 13.95%, with 79 to 84 years; 20% 74-78 years 7.09% 59-63 years 2.37% 54-58 years and 3.57% 49-53 years old.

The predominance of Caucasian patients was evident, representing almost the entire sample. Race / ethnicity is considered a risk factor for the onset of cancer. The bands are classified as high risk (African-Americans), intermediate (white) and low (Japanese)<sup>9</sup>. Srougi (2007)<sup>10</sup> points out that PCa in U.S. is 10 times more common than in Japanese residents in Japan However, the rates are equal when the Japanese began to reside in the U.S., stressing that are environmental or dietary factors, not heredity, responsible for the occurrence of the disease.

About BMI, was found in the studied population, a higher concentration of patients classified as overweight, representing 59.5% of the sample; class I obesity totaled 16.7% and 2.4% was classified as obesity class II. Adopting a healthy lifestyle is important for the prevention of PCa and involve eating foods rich in fiber, fruits, vegetables, grains; low intake of saturated fat, especially animal fat; control of sugar, salt, tobacco and alcohol, associated with the practice of daily physical exercises that help in reducing the body weight<sup>11</sup>.

Has been found that a small percentage of the sample was tobacco use and 4.8% reported having already made use of tobacco, he left the smoking habit. Regarding the use of alcoholic drinks nearly half of them reported having used any type of alcoholic beverage regularly. The INCA<sup>12</sup> states that, so far, are not known specific forms for the prevention of PCa, however, notes that a healthy lifestyle and quality can prevent the onset of diseases, including cancer.

Among those surveyed, the majority stated that there is 1 not completed elementary school. Low levels of education are associated with lack of information on the prevention or treatment of PCa<sup>11</sup>. Lucumí-Cuesta &

Cabrera Arana (2005)<sup>13</sup>, argue that the lack of information is a characteristic of the male population with lower education levels and lower socioeconomic status. Gomes *et al.* (2008)<sup>11</sup> note that the information does not always result in prevention. However, research conducted by Miranda *et al.* (2004)<sup>6</sup>, with teachers, doctors at a university, concluded that 20.7% of them even having easy access to information and diagnostic services, never made to prevent PCa. Therefore, access to information can be a preventive way to practice, but that does not mean it will go through.

Most men in this study were married, followed by separated and/ or divorced, widowed and single. In the study conducted by Gonçalves *et al.* (2008)<sup>8</sup>, 80% of men evaluated were married, 8.23% widowed, 4.7% were single, 4.7% and 2.37% consensually united divorced. There were similarities between the results of the two studies. It is believed that a stable life, the support of a partner is very healthy for the recovery of patients with PCa.

Among the patients, almost all were stemmed city of São Paulo, while only a small percentage came from cities in the state of Minas Gerais. The fact that the geographical situation of Hospital Amaral Carvalho of Jau should, because people who have the disease seek treatment closer to the region where they live, as a state to another everything becomes more difficult and tiring for the distance to be traveled.

In respect to the pathology associated, most respondents claimed to be the bearer of any chronic disease, including, hypertension, diabetes mellitus, vascular disease, epilepsy or hemorrhoids. Note that some patients had more than one chronic disease concurrently. Generally chronic diseases affect adults around 40 years old, has cancer, often appears later in older age.

About the family history of cancer, the largest number of patients reported having other close family member diagnosed with cancer. According Srougi<sup>10</sup> in relation to family history as a risk factor when a close relative, parent or sibling is affected by the disease, it increases the risk 2.2 times, however when two 1st degree relatives are carriers of tumor soar to 4.9 times, and is even more serious when three 1st degree relatives have the disease, the rates are 10.9 times. In such cases it is recommended to achieve the preventive examinations from the age of 40.

PCa second blood PSA level, the study showed that most patients had PSA results with values less than 10 g/L in a lower portion of the figures were above 10 g/L. According to Study Dini & Koff (2006)<sup>1</sup>, 80 patients with CaP, the results were 6.3% PSA <4 ng/mL, 53.8% 4-10 ng/mL and 40.0% > 10 ng/mL. This study compared with the other, the data are similar, and show a positive prognosis for patients with PCa.

According with prostatic weight, the results showed

that only a portion of the sample had prostate weight estimated by transrectal ultrasonography, 52.3% from 14 to 30g, followed by 28.5% from 31 to 40g, 2.4 to 41% 50 and 7.2% 51-60. Only 2.4% of the sample had prostate weight of 81 will more than 90g and 100g. To Crippa *et al.* (2009)<sup>14</sup> frames benign hyperplasia are associated with elevated levels of serum PSA. The maximum value of PSA compatible with benign growth equivalent to 1/10 of the weight or volume of the prostate, that is, a man with a serum PSA equal to seven or eight probably do not have cancer of the prostate gland is a weighing 80 g, but if your prostate weigh 30 g it may carry local neoplasia.

Regarding the Gleason score, it was found that all patients had Gleason score 4-9. According Crippa *et al.* (2009)<sup>14</sup>, the expectation of patients with normal prostatic touch manifest PCa is 22% to 27% when the values of serum PSA levels ranging between 2.5 and 4 ng/mL. The diagnosis of the risk of PCa when PSA levels are between 4 and 10ng/ml of 25% and 75% of these patients have negative biopsies routine. The chance of a PCa is 55% when the PSA levels are above 10 ng/mL, in which case a local biopsy is indicated. Additional reviews have been performed in these patients to reduce the use of biopsy in high-risk cases, avoid discomfort and possible complications caused by the procedure.

Evaluating on the type of surgery, we observed a higher frequency by the perineal route. According to the Brazilian Society of Urologia (2006)<sup>15</sup>, radical prostatectomy can be performed by retropubic, perineal and laparoscopic. There is no evidence in the literature concerning the good quality and a technique to differentiate from each other in relation to disease control. The retropubic classical pathway is the most used by surgeons due to the ease with access road, the opportunity to perform lymphadenectomy simultaneously exempts the use of specific instruments and also because it requires only basic knowledge to perform the technique.

When evaluated on the issue of erectile function, more than half of men have declared satisfactory erection prior to surgery, while others stated already present unsatisfactory erection prior to surgery. According to Srougi (2007)<sup>10</sup> there adverse factors related to radical surgery, despite its relevance in therapy, can cause sexual impotence and urinary incontinence. The rates of impotence are related to patients' age and affects 95% of operated above 70 years of age, approximately 60% of patients 55-65 years and in 15% to 20% of those who have less than 55 years. The risk of impotence cases are much smaller tumor hidden, i.e. not palpable on digital touch, but diagnosed by the surgeon's experience. A moderate or severe urinary incontinence affects only 1% to 2% of patients who undergo the procedure in specialized clinics, however, affects 20% to 40% of patients seen by physicians not enabled.

## 5. CONCLUSION

The results indicate that sociodemographic and epidemiological patients with PCa undergoing radical prostatectomy, characteristics analyzed in this study showed no significant difference in relation to literature.

Although PCa is considered a cancer of old age, this study showed the importance of early diagnosis in its early, asymptomatic stage. This is due to the development of health programs in human health and prevention policies, adds to this a cultural break taboo of man in relation to care of their health. The variability of populations in Brazil and worldwide, regarding race, ethnicity, culture and others, indicate the need and the importance of increasingly seek to characterize the profile of the disease in each region and thus evaluate the effectiveness of programs public health for the management of PCa.

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