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PREVENTION AND EARLY DIAGNOSIS SAVE MEN'S LIVES IN THE NORTH OF MINAS GERAIS

Mutirão de prevenção e diagnóstico precoce salva vidas de homens no norte de Minas Gerais

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Abstract: Goal: describe the epidemiological profile of the men's population assisted by the tent of urology in the 8th Campaign of prevention and early diagnosis of cancer in the municipal of Montes Claros, Minas Gerais and show the changes identified. **Methodology:** A descriptive and quantitative study carried out with data obtained from the care records from the population assisted in the Campaign of 2018. The data were presented in graphs. For tabulation and analysis, SPSS statistical software was used. **Results:** In the urology tent 572 individuals with the average of 60,7 years were assisted, in which more than half (66,8%) were married or with a stable relationship and had education until elementary school (68,1%). The evaluations identified 151 men with enlarged prostate. In 26 men (4,6%) there was node. 48 digital exams were altered, where 39 were biopsied and 16 cases confirmed prostate cancer. **Conclusion:** The Prevention and Early Diagnosis of Cancer Campaign, promoted tracking and the early diagnosis of prostate cancer, through the collection of PSAs, following the evaluation of the urologists, that when identifying significant changes in some of the men assisted population, progressed to biopsy and confirmed cases for specific cancer treatment.

Keywords: Prostate cancer; Early diagnosis; Health promotion.

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Resumo: Objetivo: descrever o perfil clínico, epidemiológico e sociodemográfico da população masculina assistida pela tenda da urologia no 8º Mutirão de Prevenção do Câncer e Diagnóstico Precoce no município de Montes Claros. **Metodologia:** estudo descritivo e quantitativo realizado com dados obtidos a partir dos registros de atendimentos feitos à população assistida pelo Mutirão de Prevenção ao Câncer no ano de 2018. Os dados foram apresentados em gráficos. Para tabulação e análise fez-se uso do software estatístico Statistical Package for the Social Sciences (SPSS). **Resultados:** Na tenda da urologia do 8º Mutirão de Prevenção do Câncer e Diagnóstico Precoce foram atendidos 572 indivíduos com média de idade de 60,7 (±5,9) anos, dos quais mais da metade (66,8%) era casada ou com união estável e possuía escolaridade de até ensino fundamental (68,1%). As avaliações identificaram 151 homens com próstata aumentada. Em 26 homens (4,6%) havia nódulo. 48 toques alterados, dos quais 39 foram biopsiados e 16 casos confirmados de adenocarcinoma da próstata. **Conclusão:** O Mutirão de Prevenção e Diagnóstico Precoce do Câncer promoveu o rastreamento e o diagnóstico precoce do câncer de próstata, por meio da coleta do antígeno prostático específico (PSA), seguida de avaliação com os urologistas, que ao identificarem alterações importantes em parte da população masculina examinada, evoluíram para biópsia e os casos confirmados, para o tratamento oncológico específico.

Palavras-chave: Câncer de próstata; Diagnóstico precoce; Promoção à saúde.

INTRODUCTION

Prostate cancer is the second most prevalent cancer in the male population in the world, being that in Brazil, this type of cancer is the second most common among men (behind only skin non-melanoma cancer). The National Cancer Institute José Alencar Gomes da Silva - INCA estimates 68,220 new cases in 2018 (INCA) with 13,772 expected deaths in this same year throughout the Brasil[1].

In absolute values and considering both sexes prostate cancer is the fourth most common type and the second most common neoplasm among men. The incidence rate is higher in developed countries compared to developing countries. In Brazil, the southeast and south regions have about 78 new cases per 100,000 inhabitants[2]. This can be explained both by the life expectancy increase of the population, as well as by the increase in the supply and quality of tools for the diagnosis[1-2].

In relation to the epidemiological characteristics of the population diagnosed with prostate cancer in the country, it is perceived that the socioeconomic differences have great influence. In a survey conducted with 1915 patients in São Paulo, it was observed that the treated patients in public institutions were older, with an index of prostate-specific antigen (PSA) higher and with a higher risk of developing metastases when compared with patients treated in the private network[3]. Another study with 17,571 men who passed through the screening for prostate cancer, identified that illiterate patients had higher PSA and with a higher probability of having a cancer at a more advanced stage when compared with literate patients[4].

Early diagnosis is of fundamental importance so that there is a cure, and if not, a higher life expectancy of patients, since the probabilities of survival decreases as the stage of the disease becomes advanced[5]. In a cohort study, using the National Base in Oncology, it was observed that, of the 16,280 patients studied, 60% were diagnosed with the disease at an advanced stage, thus increasing the risk of death in 3 to 4 times compared to patients diagnosed in stage 1[5]. Moreover, the difficulty accessing the health care network can also be a deterrent factor to the early diagnosis of this type of cancer, increasing the mortality indices, as exemplified in the center-west region of the country[6].

In this sense, due to the increase in the incidence of cancer in the northern region of Minas Gerais, Associação Presente has been conducting since 2011, Task Force of early diagnosis in Montes Claros, whose main objective is to provide multidisciplinary assistance free of charge to patients with difficulty accessing the physician and laboratory examinations, with the possibility of developing prostate cancer.

Due to that, the objective of this study is to describe the clinical, epidemiological and sociodemographic profile and alterations identified in the male population assisted by Urologists in the 8th Task Force of Cancer Prevention and Early Diagnosis of Associação Presente in the city of Montes Claros.

METHODOLOGY

It is a descriptive and quantitative study whose data were obtained from the records of visits to the population assisted in the 8th Joint Effort for Cancer Prevention and Early Detection in Montes Claros in 2018.

The data were collected using a special sheet,

intended for prostate cancer, which contemplated sociodemographic, demographic, epidemiological and clinical variables.

The information collected was digitized in spreadsheets (Excel). The results were described using charts and tables of frequencies of each variable collected by the sheets of 8th Task Force of Cancer Prevention. Tabulation and analysis were done using the SPSS.23.0 statistical software.

This study was conducted in accordance with the precepts established by Resolution 466/12 of the National Health Council of the Ministry of Health, in accordance with the approval of the Research Ethics Committee of UNIMONTES, upon embodied opinion no 2.599.222.

RESULTS

As observed in table 1, 572 individuals with the average of 60,7 years participated of this study, in which more than half (66,8%) were married or with a stable relationship and had education until elementary school (68,1%).

Table 1 - Demographic profile of individuals assisted in the Task Force for Cancer Prevention /Urologist. Montes Claros-2018.

Variables	n*	%
Age range		
Lower than 50 years	14	2.4
50-59 years	229	40.4
60-69 years	301	53.1
70 years or over	23	4.1
Marital Status		
Single	82	14.4
Married/Common Law marriage	381	66.8
Divorced/separated	81	14.2
Widow	26	4.6
Schooling		
Illiterate	32	5.6
Elementary School	357	62.5
High School	159	27.9
Upper Education	23	4.0

*The totals vary due to loss of information

In Table 2, it was analyzed that among the participants, 39.3% reported family history of cancer. There was a higher prevalence of ex-smokers (50.1%) and alcohol user individuals (44.0%). It was also observed the practice of physical activity in three or more times per week in 42.6% of the participants.

Table 2 - Characteristics of individuals assisted in the Joint Effort for Cancer Prevention/ Urology according to family history of cancer and life habits. Montes Claros, Minas Gerais, 2018.

Characteristics	n*	%
Cancer Family History		
No	344	60.7
Yes	223	39.3
Smoking		
Yes	71	13.0
No/Never Smoked	201	36.9
Former smoker	273	50.1
Alcoholism		
Yes	248	44.0
No/Never drank	144	25.6
Ex-alcoholic	171	30.4
Weekly physical activity		
None	216	39.6
Once	32	5.9
Twice	65	11.9
Three or more times	2	42.6
	32	

*The totals vary due to loss of information

Table 3 shows that regarding the clinical variables of care services, 61% reported previous digital examination without alterations and 75.9% reported prior normal PSA examination. Upon the examination carried out on the 8th Task Force to Prevent Cancer, 151 assisted in the tent of urology showed enlarged prostate, but in only 3% (corresponding to 16 people) irregularities were identified on the organ surface. In 522 individuals (92.4%) the prostate was symmetric and 65.4% had not presented any increased lobe. Regarding the presence of sulcus, in 78.4% of the patients it was preserved and in 466 (82.6%) the prostatic consistence was fibroelastic. In 26 men (4,6%) there was node.

Table 3 - Characteristics of the individuals in Joint Effort of Cancer Prevention/Urology according to clinical variables. Montes Claros, Minas Gerais, 2018.

Characteristics	n*	%
Previous digital examination		
Normal	315	61.0
With alterations	48	9.3
Does not know	6	1.2
Never carried out	147	28.5
Previous PSA		
Normal	394	75.9
With alterations	49	9.4
Does not know	19	3.7
Never carried out	57	11.0
Digital		
Normal	404	72.8
Increased	151	27.2
Surface		
Regular	523	97.0
Irregular	16	3.0
Symmetric		
Yes	522	92.4
No	43	7.6
Increased lobe		
No	374	65.4
Right	31	5.4
Left	17	3.0
Diffuse	150	26.2
Sulcus		
Preserved	438	78.4
Faded	121	21.6
Consistency		
Fibroelastic	466	82.6
Hardened	95	16.8
Stony	3	0.6
Node		
Yes	26	4.6
No	536	95.4

*The totals vary due to loss of information

In Table 4, it is observed that after the questioning about urinary complaints it was notified that 392 (69.1%) had no complaint, but 10.8% reported alguria, 1.9% reported having incontinence and 5.6% (n=32) reported having a weak jet. 48 digital exams were altered, where 39 were biopsied and 16 cases confirmed prostate cancer.

Table 4 - Characteristics of the individuals in Joint Effort of Cancer Prevention/Urology according to urinary complaint. Montes Claros, Minas Gerais, 2018.

Urinary complaint	n*	%
No complaint	392	69.1
Dysuria	28	4.9
Alguria	61	10.8
Incontinence	22	3.9
Urgency	10	1.8
Pollakiuria	6	1.1

Continuation of Table 4

Urinary complaint	n*	%
Nocturia	5	0.9
Hematuria	4	0.7
Weak jet	32	5.6
Dripping	7	1.2

*The totals vary due to loss of information

DISCUSSION

The Brazilian population goes through a process of increased life expectancy due to demographic and epidemiological, socioeconomic transitions and by advances in the field of medicine. Therefore, in recent decades, it was observed that chronic non-communicable diseases (NCDS) have spearheaded the causes of death in Brazil, surpassing the rates of contagious diseases. Changing the mortality profile of the Brazilian population, with an increase in the occurrence of cardiovascular diseases, cancer and respiratory diseases[7].

Among the neoplasms, the prostate CA has significant importance, because it is the second most common type of cancer among men in Brazil, being surpassed only by non-melanoma skin cancer, an estimated 70.54 new cases per 100,000 individuals. According to data from the INCA (National Cancer Institute José Alencar Gomes da Silva) in the year 2014-2015 more than 500 thousand new cases of cancer in Brazil were diagnosed, which placed it among the countries with the highest incidence of this neoplasm in the world today[8].

Age is the risk factor best related to the etiology of the disease, approximately 62% of diagnosed cases worldwide occur in men aged 65 years or over[9]. As an example of what has been said, out of the 572 individuals assisted in the Prevention Task Force, in the Urology Office, 53.1% or 301 patients were classified in the age range from 60 to 69 years. Demonstrating that the society presents consciousness about the increase in the incidence and prevalence of Prostate CA in the third age.

There are still other risk factors associated with the development of cancer, such as the age mentioned above, which are strongly present in the Brazilian population, highlighting; positive family history for cancer, smoking, alcohol consumption and physical inactivity[10]. In accordance with the data of the Task Force, 39.3% of the participants had a positive family history for the CA prostate, approximately 50.1% were former smokers, 44.0% stated being alcoholic and 39.69% reported not practicing any physical activity a week. These data corroborate with the importance in risk factors on the incidence of the disease.

The CA Prostate cancer at an early stage shows silent evolution, many times without any clinical complaint presented by the patient. Therefore, it is resembled to the physiological changes resulting from aging (difficulty urinating and need to urinate often)[11]. This fact was corroborated by 69.1% of the patients of the Task Force not presenting any urinary complaint. However, 10.8% presented complaints of alguria and 4.9% of dysuria, symptoms which may be present in the senescence and/or the disease.

The screening of CA of the Prostate is accomplished in a simple way, through the dosage of PSA (prostate specific antigen) and completion of the rectal digital examination (TR), its validity as a diagnostic method is remarkable for the cases of neoplasm in early stage, because it directly affects the rate of mortality. According to the American Association of Urology (AUA), only those patients between 55-69 years should be considered for the screening, the age range also respected by the Task Force[12]. Of the 572 patients, 72.8% had normal consistency to TR and 27.2% showed some

alteration to TR. Regarding the PSA 75.9% were within the reference values expected for the age group and 9.4% or 49 patients were outside of the determined reference value.

For completion of diagnosis of prostate CA, it is required, after PSA and TR, the realization of transrectal biopsy for definition of the histological type. It is seen that the campaigns of prevention and health promotion, such as the 9th Task Force to Prevent Cancer, are crucial for the early diagnosis of this pathology, consequently, increasing the chances of cure and rehabilitation of the patient in relation to the disease. According to INCA's estimates for the year 2018 in Minas Gerais, it is expected that be diagnosed 65.12 cases for each one hundred thousand men[1]. In the 9th Task Force to Prevent Cancer 16 cases of prostate CA were confirmed in a population of 572 patients, being one of those classified in an advanced stage of the disease.

This demonstrates that for every 35 visits in the Task Force, one case of this malignancy was diagnosed. According to these data, it is clear the importance of projects and practices in health, such as the Task Force to Prevent Cancer that tries to streamline the time between the diagnosis and treatment of the patient, interfering positively in evolution, mortality and increasing the chances of cure.

This analysis showed some limitations, such as the population sample, constituted only of Montes Claros - MG and towns of the region; the numeric value of n population, dependent only on the active search of patients for the care service; the period of time for the collection, exclusively associated with the day of completion of the 9th Task Force to Prevent Cancer. These biases should be considered during the analysis of the data obtained.

CONCLUSION

This study showed that 53.1% of patients were classified in the age range from 60 to 69 years, 39.3% of the participants had a positive family history for the CA prostate, approximately 50.1% were former smokers, 44.0% stated being alcoholic and 39.69% reported being sedentary. Corroborating with the silent evolution of this cancer, 69.1% of the attended people had no urinary complaints, 27.2% showed some alteration to the rectal digital examination and 9.4% had PSA values changed. Finally, 16 cases of prostate CA were confirmed in a population of 572 patients treated.

The Task Force for Prevention and Early Diagnosis of Cancer settles as highly effective in promoting health, promoting the screening and early diagnosis of prostate cancer, through the PSA, followed by evaluation with the Urologists.

In this context highlights the importance of health promotion actions, such as the Task Force, which contribute as screening strategy leading to prevention and early diagnosis, saving lives and impacting on the quality of life of men in the North of Minas Gerais.

REFERENCES

1. Instituto Nacional de Câncer. Próstata. 2018. Disponível em: < http://www2.inca.gov.br/wps/wcm/connect/tiposdecancer/site/home/prostata>. Acesso em: 8 Jul. 2018.

2. TOURINHO-BARBOSA, R. R.; POMPEO, A. C. L.; GLINA, S. Prostate cancer in Brazil and Latin America: epidemiology and screening. **International braz j urol**, v. 42, n. 6, p. 1081-1090, 2016. Disponível em: < http://

www.scielo.br/pdf/ibju/v42n6/1677-5538-ibju-42-06-1081.pdf>. Acesso em: 8 Jul. 2018.

3. NARDI, A. C. *et al*. Comparison of the epidemiologic features and patterns of initial care for prostate cancer between public and private institutions: a survey by the Brazilian Society of Urology. **International braz j urol**, v. 38, n. 2, p. 155-166, 2012. Disponível em: < http://www.scielo.br/pdf/ibju/v38n2/v38n2a03.pdf>. Acesso em: 8 Jul. 2018.

4. TOBIAS-MACHADO, M. *et al*. Association between literacy, compliance with prostate cancer screening, and cancer aggressiveness: results from a Brazilian screening study. **International braz j urol**, v. 39, n. 3, p. 328-334, 2013. Disponível em: < http://www.scielo.br/pdf/ibju/v39n3/1677-5538-ibju-39-03-328.pdf>. Acesso em: 8 Jul. 2018.

5. BRAGA, S. F. M. *et al*. Patient survival and risk of death after prostate cancer treatment in the Brazilian Unified Health System. **Revista de saude publica**, v. 51, p. 46, 2017. Disponível em: < http://www.scielo.br/pdf/rsp/v51/pt_0034-8910-rsp-S1518-87872017051006766.pdf>. Acesso em: 10 Jul. 2018.

6. SILVA, J. F. S. da; MATTOS, I. E.; AYDOS, R. D. Tendencies of mortality by prostate cancer in the states of the Central-West Region of Brazil, 1980-2011. **Revista Brasileira de Epidemiologia**, v. 17, p. 395-406, 2014. Disponível em: <https://www.ncbi.nlm.nih.gov/pubmed/24918412>. Acesso em: 10 Jul. 2018.

7. CARVALHO, M. H. R. de *et al*. Tendência de mortalidade de idosos por doenças crônicas no município de Marília-SP, Brasil: 1998 a 2000 e 2005 a 2007. **Epidemiologia e Serviços de Saúde**, Brasília, 23(2):347-354, abr-jun 2014. Disponível em: < http://www.scielo.br/pdf/ress/v23n2/1679-4974-ress-23-02-00347.pdf>. Acesso em: 13 Jul. 2018.

8. PANIS, C. *et al*. Revisão crítica da mortalidade por câncer usando registros hospitalares e anos potenciais de vida perdidos. **Einstein (São Paulo)**, São Paulo , v. 16, n. 1, eAO4018, 2018 . Disponível em: < http://www.scielo.br/pdf/eins/v16n1/pt_1679-4508-eins-16-01-eAO4018.pdf>. Acesso em: 13 Jul. 2018.

9. MODESTO, A. A. D. *et al*. Um novembro não tão azul: debatendo rastreamento de câncer de próstata e saúde do homem. **Interface (Botucatu)**, Botucatu, v.22, n.64, p.251-262, Mar. 2018. Disponível em: <http://www.scielo.br/pdf/icse/v22n64/1807-5762-icse-22-64-0251.pdf>. Acesso em: 16 Jul. 2018.

10. McLean RC, L.J. The individual and combined effects of obesity and type 2 diabetes on cancer predisposition and survival. **Curr Nutr Rep**. 2015;4(1):22-32. Disponível em: < https://link.springer.com/article/10.1007/s13668-014-0105-3>. Acesso em: 16 Jul. 2018.

11. MINISTÉRIO DA SAÚDE. Diretrizes Diagnósticas e Terapêuticas do Adenocarcinoma de Próstata. Secretaria de Ciência, Tecnologia e Insumos Estratégicos. 2015. Disponível em: < http://conitec.gov.br/images/Consultas/Relatorios/2015/DDT_Adenocarcinomadeprostata_CP.pdf>. Acesso em: 18 Jul. 2018.