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ADMISSION PROFILE OF ADULT AND ELDERLY PATIENTS WITH MALIGNANT PROSTATE NEOPLASM IN THE PUBLIC HEALTH NETWORK IN FLORIANÓPOLIS CITY

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Abstract: INTRODUCTION: Malignant prostate neoplasia is one of the most common tumors in the world population, considered a cancer of old age. There are several factors that lead to the development of prostate cancer, including: a diet rich in red meat, fat, milk and dairy products; urinary tract senescence; smoking; alcoholism; family history and hormonal factors. The prostate is an exocrine gland of the androgen-dependent male urogenital system and its main function is to produce prostatic fluid. It is the size of a walnut, is located at the base of the bladder, has a fibroelastic texture and is divided into 3 parts. Patients with prostate cancer in more advanced stages may report urinary and ejaculatory symptoms. The diagnosis results from an investigation carried out by carrying out a range of tests, such as PSA, which is a protein physiologically released by the prostate, total PSA has a limit of 4 ng/mL, and values above the limit are suggestive of a deeper investigation. Furthermore, rectal examination is extremely important in screening for prostate neoplasms, it is based on palpation of the lower posterior prostatic region through the anal canal, and finally prostate biopsy is indicated when PSA levels are very high, it is performed a removal of tissue material and classified within the Gleason Score which is the sum of the primary (predominant) and secondary pattern. The Gleason Score can be represented as a well-differentiated tumor, with gleason 2-4, intermediate with gleason 5-6, poorly differentiated, gleason 7 and finally gleason 8-10 being an undifferentiated tumor, the last one with the worst prognosis. Interventional treatment of prostate cancer involves combining several measures that aim to eradicate malignant cells, such as surgery, radiotherapy, hormone therapy and chemotherapy.

OBJECTIVE: To analyze the hospitalization profile of adult and elderly patients with malignant prostate neoplasia in the public health network in Florianópolis city.

METHODOLOGY: A quantitative and qualitative study was carried out using a cross-sectional approach, with data collection from January 2018 to December 2022. The search for evidence was carried out using public domain information on the DATASUS digital platform.

RESULTS: The data for the period analyzed has a regularity from 2019 onwards, with 2022 being the year with the highest number of hospitalizations, with 119 hospitalizations (22.7%), and the year 2018 recorded the lowest incidence, with 49 interactions (9.3%). The age group with the most hospitalizations was 65-74 years old, which together accounted for 48.1% of cases and 85% of patients were treated with chemotherapy.

CONCLUSIONS: Given the above regarding the profile of patients hospitalized for malignant prostate neoplasia, age, smoking and alcohol consumption are considered decisive factors in the genesis of public policies for prevention and screening of the disease.

Keywords: Neoplasia, Hospitalization, Prostate, Incidence

THEMATIC AREA: Uro-oncology

INTRODUCTION

Malignant prostate neoplasm is one of the most common tumors in the world population. It currently ranks second overall for cancers in men, second only to non-melanoma skin cancer in incidence and lung cancer in mortality [1]. It is considered a cancer of old age, since three quarters of cases worldwide occur in people over 65 years of age [2,3].

There are several factors that lead to the development of prostate cancer, including: a diet rich in red meat, fat, milk and dairy products; urinary tract senescence; smoking; alcoholism; family history and hormonal factors[4,5]. Furthermore, the incidence of

malignant prostate neoplasia depends on the geographic area studied, due to exogenous factors interfering with the progression of the disease [5].

The prostate is an exocrine gland of the androgen-dependent male urogenital system and its main function is to produce prostatic fluid. It is the size of a walnut, is located at the base of the bladder and has a fibroelastic texture [7,8]. Anatomically, it is divided into 3 zones, the peripheral zone corresponding to 70% of the glandular tissue. The central zone represents 25% of the prostate, where sperm passes through the urethra, and finally the transitional zone, a small prostatic portion (5% of the total volume) that surrounds a portion of the urethra between the urinary bladder and the verumontanum, a limit anatomical [9,10].

Clinically, patients with malignant prostate neoplasia present in more advanced stages with lower urinary tract symptoms (LUTS), such as hematuria; dysuria; decreased urine flow and nocturia [11,12]. In addition, ejaculatory symptoms such as hematospermia, dysorgasmia and hypospermia are also seen [13,14].

The diagnosis results from an investigation carried out by carrying out a range of tests. PSA (Prostate Specific Antigen) is a protein released in the seminal fluid and is synthesized by the prostate. Physiologically, a healthy man has low concentrations in serum levels [15]. Total PSA has a limit of 4 ng/mL, and values above the limit are suggestive of a deeper investigation. The test has high sensitivity, however, low specificity, therefore, a combination with the touch test is recommended [16].

Furthermore, rectal examination is extremely important in screening for prostate neoplasms, it is based on palpation of the lower posterior prostatic region through the anal canal, relatively, it is a low-cost preventive measure. However, it is a test that puts many men off due to its invasive nature from a physical and emotional point of view [15,17].

Prostate biopsy is indicated when PSA levels are very high, tissue material is removed and classified according to the Gleason Score, which is the sum of the primary (predominant) and secondary pattern, thus, the tumors are better differentiated ones would have the score represented by the equation 1+1=2 and the more undifferentiated ones would have 5+5=10, the second having the worst prognosis [15,18,19].

The clinical interpretation of the Gleason Score can be represented as a well-differentiated tumor, with gleason 2-4, intermediate with gleason 5-6, poorly differentiated, gleason 7 and finally gleason 8-10, being an undifferentiated tumor [18,19]. In the clinical context, a gleason 4+3=7 compared to a gleason 3+4=7 has a worse prognosis, indicating greater malignancy and tumor aggressiveness [20,21].

The ISUP score classifies tumors of grade ISUP 1 representing Gleason ≤ 6, ISUP 2 representing Gleason 7 (3+4), grade ISUP 3 representing Gleason 7 (4+3), grade 4 representing those with Gleason 8 and those with grade 5 are Gleason 9 or 10, with the degree of aggressiveness directly proportional to the increase in the number in the ISUP score [22].

Interventional treatment of prostate cancer involves combining several measures that aim to eradicate malignant cells. Surgery is suggested for high-risk locally advanced carcinoma [23]. Both external beam radiotherapy (EBRT) and brachytherapy are the second best option for treating localized cancer and have shown remarkable improvement in recent years due to the development of technology [24,25].

Hormone therapy is a therapeutic model that acts by inhibiting the production of

testosterone, helping with tumor regression and suppression, given its androgenic dependence [23,24]. And finally, chemotherapy, often used when the neoplasm has already dispersed and hormonal therapy has not collaborated with the expected result [23, 25].

Therefore, it is essential that the aging of the Brazilian population guides public health policies, as the senescence of the urogenital system, smoking and alcohol consumption are risk factors that are very present in contemporary Brazil [2,4]. Therefore, studying the context of hospitalizations for prostate cancer helps to understand the risk factors and their respective prophylaxis. In this regard, the question is what is the hospitalization profile of adult and elderly patients with malignant prostate neoplasia in Florianópolis city.

GOAL

To analyze the hospitalization profile of adult and elderly patients with malignant prostate neoplasia in the public health network in Florianópolis city, Santa Catarina, with the aim of evaluating whether risk factors and their respective prophylaxis influence the disease's development.

METHODOLOGY

A quantitative and qualitative study was carried out using a cross-sectional approach, with data collection from January 2018 to December 2022. The search for evidence was carried out using public domain information on the DATASUS digital platform, which brings together statistics from the Hospital Information (SIH) and the Cancer Information System (SISCAN), through the "Panel-Oncology" section. The inclusion criteria analyzed were adults aged 50 to 59 years, and elderly people aged 60 to 80 years or more, hospitalized for prostate cancer in Florianópolis city, state of Santa Catarina. The dependent variable related to the outcome

was the presence of prostate neoplasms, while the previously determined independent variables were age group, treatment, year of hospitalization and city of residence, in which patients are diagnosed, resident and treated in the Florianópolis city region. As this involves the use of public domain material, submission to the Research Ethics Committee (CEP) is not necessary.

RESULTS

In the observed interval, Santa Catarina had 5,203 hospitalizations for malignant prostate neoplasms, in which Florianópolis city had 524 records (10.7%). The data for the period analyzed has a regularity from 2019 onwards, with 2022 being the year with the highest number of hospitalizations, with 119 hospitalizations (22.7%), followed by 113 hospitalizations (21.6%) in 2019 and the year of 2018 recorded the lowest incidence, with 49 interactions (9.3%).

Regarding the age range of hospitalized patients, they were defined in groups with intervals of half a decade. In order to conclude the study, two age divisions were considered, adults (50-54; 55-59) and elderly (60-64; 65-69; 70-74; 75-79; 80 years and over). The data showed that the age groups 65-69 and 70-74 tied and had the highest number of hospitalizations for prostate cancer, together representing 48.1% of cases (252), followed by 60-64 with 16.0% (84), and the range of 75-79, 15.0% (79). The least significant ages were in the range 50-54 and 80 years and more than combined they corresponded to 10.8% (57).

Regarding the treatment variable, they were divided into 3 major therapeutic modalities: surgery, radiotherapy and chemotherapy. The vast majority of patients, corresponding to 446 or 85% of cases, who were hospitalized during the study interval, underwent chemotherapy of 48 patients (9.1%) were treated with radiotherapy, and finally the least used

therapeutic modality with only 30 patients (5.7%) was surgery.

According to the municipality of residence, we know that Florianópolis city is made up of 10 municipalities in its Metropolitan Core (Águas Mornas, Antônio Carlos, Biguaçu, Florianópolis, Palhoça, Santo Amaro da Imperatriz, São José, São Pedro de Alcântara and Governador Celso branches). In the time frame investigated, the municipalities of Florianópolis and São José together are equivalent to 319 hospitalizations (60.8%) for malignant prostate neoplasia, being the two cities with the highest number of diagnoses, and São Pedro de Alcântara with 2 diagnoses (0.4%) equivalent to the municipality with the lowest number of cases.

DISCUSSION

The Florianópolis city region corresponds to an area of the state of Santa Catarina with notable development in the field of health. Presenting reference hospitals that receive cancer referrals from across the state, such as CEPON (Oncology Research Center), Hospital Regional de São José Drhomero Miranda Gomes, Hospital Governador Celso Ramos, Imperial Hospital de Caridade and ``Hospital Universitário Professor Polydoro Ernani de São Thiago``.

At the time studied, malignant prostate neoplasia proved to be a disease largely influenced by age, with the most affected age group being the elderly aged 65-79 years, which reached a total of 48.1% of hospitalizations with chemotherapy as the most common form of treatment. incident (85%), where Florianópolis and São José were the municipalities with the highest number of diagnoses. This fact has a causal relationship with urological senescence and adverse effects such as alcoholism and smoking, the effects of which are manifested today in public health care.

CONCLUSIONS

In view of the above, regarding the profile of patients hospitalized with malignant prostate neoplasia, age is seen as an impactful risk factor, therefore, the construction of public policies to prevent the disease is essential. The need to prioritize elderly people in primary care and strengthen the need to prevent prostate cancer through medical consultations must guide health departments in the Florianópolis city region. As a form of screening and early diagnosis so that the affected patient has the best prognosis and possible treatment.

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