Patients diagnosed with cancer in a Cuban health area

Pacientes diagnosticados con cáncer en un área de salud cubana

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SUMMARY

Introduction: Cancer is a disease characterized by the proliferation of malignant cells. It is a health problem and one of the leading causes of death worldwide.

Objective: To characterize patients diagnosed with cancer in a Cuban health area.

Methods: An observational, descriptive, cross-sectional study was conducted in the population diagnosed with cancer belonging to the "Raúl Gómez García" teaching polyclinic, in the town of 10 de Octubre, during the year 2022. The population consisted of 59 patients. All patients diagnosed with cancer with a complete individual medical history were included. Those who did not give their consent to participate in the research were excluded.

Results: The most frequent incidence was male (n=33; 55, 9 %), the age group between

61-70 years (n=27; 45, 8 %) and arterial hypertension (n=19; 32, 2 %) as a personal pathological history. The most common location of the primary tumors was the lung (n=21; 35, 6 %), followed by prostate cancer (n=16; 27, 1 %). The most frequent stages were II (n=25; 42, 4 %) and I (n=24; 40, 7 %).

Conclusions: The population studied is characterized by a predominance of hypertensive patients, male, between the sixth and seventh decades of life. Primary lung cancer is the most frequent; most patients are alive, are active smokers and have not received surgical treatment.

Keywords: cancer; death; oncology.

RESUMEN

Introducción: El cáncer es una enfermedad que se caracteriza por la proliferación de células malignas. Constituye un problema de salud y es una de las primeras causas de muerte a nivel global.

Objetivo: Caracterizar a los pacientes diagnosticados con cáncer en un área de salud cubana.

Métodos: Se realizó un estudio observacional, descriptivo, de corte transversal, en la población diagnosticada con cáncer perteneciente al policlínico docente "Raúl Gómez García", de la localidad de 10 de Octubre, durante el año 2022. La población estuvo compuesta por 59 pacientes. Se incluyeron a todos los pacientes diagnosticados con cáncer con historia clínica individual completa. Se excluyeron a aquellos que no dieron su consentimiento para participar en la investigación.

Resultados: Se observó mayor frecuencia del sexo masculino (n=33; 55,9 %), del grupo etario comprendido entre 61-70 años (n=27; 45,8 %) y la hipertensión arterial (n=19; 32,2 %) como antecedente patológico personal. La localización más común de los

tumores primarios fue el pulmón (n=21; 35,6 %), seguido del cáncer de próstata (n=16; 27,1 %). Los estadios más frecuentes fueron el II (n=25; 42,4 %) y I (n=24; 40,7 %).

Conclusiones: La población estudiada se caracteriza por el predominio de pacientes hipertensos, del sexo masculino, entre la sexta y séptima décadas de la vida. El cáncer primario de pulmón es el de mayor frecuencia; la mayoría de los pacientes están vivos, son fumadores activos y no han recibido tratamiento quirúrgico.

Palabras clave: cáncer; muerte; oncología.

INTRODUCTION

Cancer is a disease characterized by abnormal cell proliferation. More than 200 types have been described, affecting all organs of the body, with differences in symptoms and treatments, although they have common elements. [1]

Sora Rodriguez and Horta Martinez [2] they state that the existence of this disease has been linked to human beings since time immemorial; the main reported locations are: breast, lung, colon, rectum and prostate. The World Health Organization (WHO) in 2020 reports that 10 million people died from this disease (one in six). [3]

The WHO estimates that by 2030 there will be 27 million new cases; 17 million deaths from this disease and 75 million people will live with cancer. In the Americas, 3.8 million people were diagnosed with this malignant entity and 1.4 million died from it. [4, 5]

Its detection at an advanced stage, the lack of diagnosis and timely treatment, identify this disease as a problem of global interest not only for public health, but also for the basic knowledge of biomedical sciences. [6]

*Ferlay J*and others [7] in an investigation express In the Americas, prostate cancer is the leading cause of morbidity and mortality in men; in women, death from breast cancer is more frequent..At present, making an early diagnosis, offering adequate treatment and improving patient survival is a challenge. For this reason, this research was carried out with the aim of characterizing patients diagnosed with cancer in a Cuban health area.

METHODS

Type of study and context

An observational, descriptive, cross-sectional study was carried out in the population diagnosed with cancer belonging to the "Raúl Gómez García" teaching polyclinic, in the town of 10 de Octubre, in Havana, during the year 2022.

Study population and sample

59 patients were studied, who met the following selection criteria:

Inclusion criteria

1. Confirmed diagnosis of cancer.
2. Patient consent to participate in research.

Exclusion criteria

1. Individual medical history with insufficient data, making it impossible to collect data of interest for the study.

Variables

The variables analyzed were the following: sex, age group, personal pathological history (PPH), smoking, location of the primary tumor, stage, patient status (alive or dead), surgical intervention.

Collection, processing and analysis of information

All necessary data were collected from the medical records using specially designed spreadsheets. Data processing was performed using the statistical software EXCEL, part of the Microsoft Office 2016 package. Descriptive statistics measures were used.

Ethical aspects

The study design respected the ethical principles of the Declaration of Helsinki (8) and was approved by the ethics committee and the scientific council of the institution.

RESULTS

Of the 59 patients evaluated, the highest percentage was male (n=33; 55, 9 %), the most frequent age group was 61-70 years (n=27; 45, 8 %) with a mean age of 59 years $\pm$ 17, 7 years. Arterial hypertension was the most frequently observed APP (n=19; 32, 2 %). 58 % (n=29) were active smokers and 15 (30 %) reported not having regular contact with cigarette smoke, either as passive or active smokers. Table 1

Table 1. Distribution of patients by sex, age and APP

Variables	
Middle Ages(± DE)	56,9±12,08
Sex (n=59) (n; %)	
Female	26; 44,1 %
Male	33; 55,9 %
Age group	(n; %)
14 – 30 years	7; 11,7
31 – 40 years	3; 5,1
41 – 50 years	1; 1,7
51 – 60 years	5; 8,5
61 – 70 years	27; 45,8
71 – 80 years	10; 16,9
81 years or older	6; 10,2
APP	(n; %)
HTA	19;32,2
DM	10;16,9
AB	7;11,7
Others	20;33,9
Smoking	(n; %)
Yeah	29;49,1
No	15;25,4
Passive	15;25,4

Legend: APP: family history of disease; DM: diabetes mellitus; AB: bronchial asthma

Figure 1 shows the distribution of tumors according to their location and stage. The most frequent location of primary tumors was the lung (n=21; 35, 6 %), followed by prostate cancer (n=16; 27, 1 %). The highest percentage was found in stages II (42, 4 %) and I (40, 7 %). Stage IV was not observed in prostate, breast, and cervical tumors.
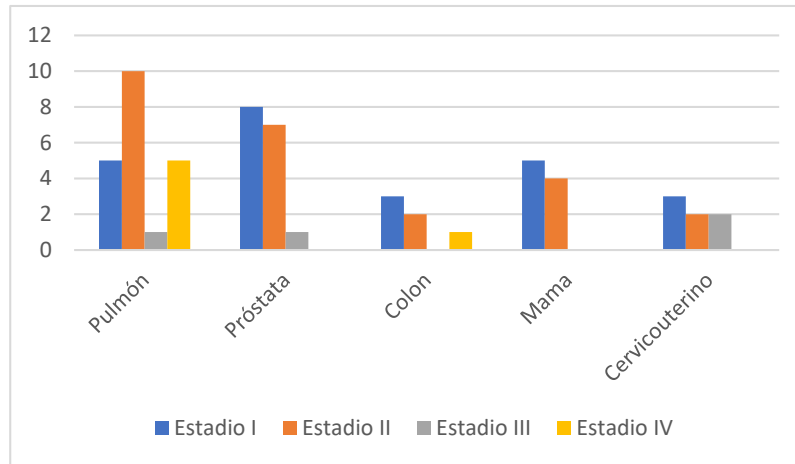
Fig. 1-Distribution of patients according to the location of the primary tumor and the stage

85 % (n=50) of the patients were alive at the time of the study and only 9 (15 %) had died, 59 % (n=35) of patients did not require surgical intervention. Table 2

Table 2. Distribution of patients according to their condition at discharge and treatment

Patient status (n=59)	n; %
Alive	50;85
Deceased	9;15
Treatment (n=59)	
Surgical intervention	24;0,6
Doctor	35;59

DISCUSSION

The Cuban health statistics yearbook shows that in 2021 a total of 167,649 people died, which represents a rate of 15 per 1,000 inhabitants, with a predominance of the male sex with 92,006 deaths; the province of Havana led the group with the highest number of deaths: 34,164, almost 10,000 more deaths than in 2020. [9]

Tumors were the second cause of death in Cuba in 2021 with 26,791 deaths; 5,628 of them in Havana. The figure for male predominance in this study coincides with that reported in the Cuban Health Statistical Yearbook. [9]

In this research, hypertension and DM, despite being modifiable and controllable diseases, were the most frequent APPs. The authors consider that these results are due to the high prevalence of these two entities worldwide, where Cuba is no exception. Both diseases are part of the metabolic syndrome and are frequently present in a patient, which brings with it a high impact on morbidity and mortality. [10, 11]

The main causes of lung cancer, as well as cancer in general, involve carcinogens such as smoking; exposure to these agents causes changes in DNA (deoxyribonucleic acid) and genetic alterations progressively accumulate, which transform the bronchial lining epithelium in the lung; with increasing damage, the chances of developing cancer increase. [12]

The literature reports it as one of the most frequent cancers worldwide, with a higher incidence in the male sex, in the ages between 60 and 65 years; less than 15 % of cases are observed in people under 30 years of age. Surgery is the treatment of choice. In this research, lung cancer was the most frequent cancer, observed in patients exposed both passively and actively to cigarette smoke, with a higher mortality rate in the male sex, coinciding with that reported by other authors. [12, 13]

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Prostate cancer is the second most common cancer in men after lung cancer. With the implementation of the screening program, a greater number of cases are diagnosed every day; in Latin America, it represents the first reason for attention in uro-oncology consultations. The results of this series are similar to those reported in the literature.

Colon cancer is the third most prevalent cancer in men and the second most prevalent in women in the Caribbean region, so these figures do not correspond to what was observed in the present study. The authors consider that these results could be related to the number of patients recruited for this research. [7]

Breast and cervical cancer are common in women. Breast cancer has a prevalence of 22,7 % worldwide; despite being typical of the female sex, it can represent up to 1 % of male tumors. Cervical cancer has an incidence of 21,2 new cases per 100,000 women worldwide; in Latin America the figures are more frightening, reaching 22.8 per 100,000 women/year. Early detection within screening programs and the application of provisional, effective and concrete measures help in the vigorous management of these diseases. [14-17]

In the present investigation, no patients were observed in stage IV for prostate, breast and cervical tumors. The authors consider that these results are due to compliance with the active screening programs carried out in primary health care.

The type of treatment and patient survival is related to the stage of the disease at the time of diagnosis. The study by Campos-Guzmán [18] reports that in Colombia the overall survival rate of those suffering from prostate cancer at five years was 57 %, and at seven years, 55 %. The survival rate of intermediate-risk patients was 90 % at both five and seven years, while for high-risk patients it was 35 % and 30 % at five and seven years, respectively. The highest number of deaths occurred in the first three years after treatment by hemato-oncology.

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Colon cancer accounts for 11,7 % of all cancer deaths worldwide; with an incidence of 5,9 % in 9.2 million cases for women and 6,0 % in 10.1 million cases for men. A favorable social status positively influences the survival of patients with breast cancer in capitalist countries, as it promotes the opportunity for access to health services and special care. [19-21]

In the study by Ruiz-González et al. [20] it is established that women who survive breast cancer have higher levels of resilience. The creation of programs that are focused on strengthening resilience would act as a preventive intervention for depression in healthy and sick women. Including subdimensions of resilience will allow for prompt and effective action in the prevention of psychopathological comorbidities and serious emotional disorders.

In Cuba, health programs are designed for a timely approach to these diseases, including strategies that address the patient as a biopsychosocial being, which positively impacts not only survival but also the quality of life of these patients, as shown by the results of this series.

CONCLUSIONS

The population studied is characterized by a predominance of hypertensive patients, male, between the sixth and seventh decades of life. Primary lung cancer is the most frequent; most patients are alive, are active smokers and have not received surgical treatment.

BIBLIOGRAPHIC REFERENCES

1. Horta Martínez LE, Sorá Rodriguez M. Cell cycle and cancer. Morfovirtual 2022[Internet]. 2022 [access: 06/07/2023].Available in:https://morfovirtual.sld.cu/index.php/morfovirtual22/2022/paper/view/617

2. Sorá Rodríguez M, Horta Martínez LE. Historical journey through cancer. Histomed[Internet]. 2022 [access: 06/07/2023].Available in:https://histomed.sld.cu/index.php/histomed22/2022/paper/view/169/

3. World Health Organization. Cancer[Internet]. 2022 [access: 07/06/2023]. Available at:https://www.who.int/es/news-room/fact-sheets/detail/cancer

4.Pan American Health Organization. Cancer [Internet]. 2022 [access: 07/06/2023]. Available at:https://www.paho.org/es/temas/cancer

5. Álvarez M, Galindo H, Sáez C, Risueño C. Cancer in the molecular era: general concepts and clinical applications.Chilean Journal of Surgery [Internet].2002[access: 07/06/2023]; 54(4): 417-423. Available at:https://www.ciruanosdechile.cl/revista_anteriores/PDF%20Cirujanos%202002_04/Cir.4_2002%20Cancer%20era%molecular.pdf

6. López Estupiñán AD, Mondragón Chávez AF, Giraldo Velásquez AF, Olave Medina JD, Londoño Velasco E. Description of the main epigenetic alterations associated with the development of colorectal, prostate, breast and gastric cancer: Review of the topic. Salutem Scientia Spiritus[Internet].2021[access: 06/07/2023]; 7(1):36-51. Available in:https://www.researchgate.net/publication/356065187

7. Ferlay J, Colombet M, Soerjomataram I, Parkin DM, Piñeros M, Znaor A, Bray F. Cancer statistics for the year 2020: An overview. Int J Cancer. 2021; 149: 778–789. DOI:10.1002/ijc.33588

8. AMN. AMN Declaration of Helsinki–Ethical Principles for Medical Research Involving Human Subjects. Fortaleza: 64th General Assembly; 2013 [access:07/06/2023]. Available at:

https://www.wma.net/en/policies-post/wma-helsinki-declaration-ethical-principles-for-medical-research-involving-humans/

9. Ministry of Public Health. Statistical Yearbook of Health 2021. National Directorate of Medical Records and Health Statistics. Havana: Ecimed; 2022 [access: 06/07/2023]. Available at:https://salud.msp.gob.cu/anuario-estadistico-de-salud-de-cuba

10.SalazarM,BarochinerJ, Espeche W, Ennis I. COVID-19, hypertension and cardiovascular disease. Hypertens Risk Vasc. 2020; 37(4): 176-180. DOI :/10.1016/j.hipert.2020.06.003

11. Giralt Herrera A, Rojas Velázquez J, Leiva Enríquez J. Relationship between COVID-19 and Arterial Hypertension. Rev Habanera[Internet].2020 [access:07/06/2023]; 19(2): e_3246. Available at: https://www.revhabanera.sld.cu/index.php/rhab/article/view/3246

12. Nazario Dolz AM, Álvarez Matos D, Castillo Toledo L, Miyares Peña MV, Garbey Nazario A. Some specificities regarding lung cancer. Cuban Journal of Military Medicine[Internet].2021 [access:10/06/2023]; 50(1): e0210725. Available in:www.revmedmilitar.sld.cu/index.php/mil/article/view/725/664

13. Molina López CD, Ucles Villalobos V. Pulmonary rehabilitation in patients with lung cancer. Clinical Journal of the UCR-HSJD School of Medicine[Internet].2019 [access: 10/06/2023]; 9(6): 45-52. Available in:https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=91531

14. Osorio Bazar N, Bello Hernández C, Vega Bazar L. Risk factors associated with breast cancer. Cuban Journal of Comprehensive General Medicine[Internet].2020 [access:10/06/2023]; 36(2): e1147. Available in:http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21252020000200009&lng=es

15. Okunade KS. Human papillomavirus and cervical cancer. J Obstet Gynaecol 2020; 40: 602-608. DOI:10.1080/01443615.2019.1634030

16. Chan CK, Aimagambetova G, Ukybassova T, Kongrtay K, Azizan A. Human papillomavirus infection and cervical cancer: Epidemiology, screening, and vaccination-review of current perspectives. J Oncol. 2019; 3257939. DOI:10.1155/2019/3257939

17. Gilbert DC, Wakeham K, Langley RE, Vale CL. Increased risk of second cancers at sites associated with HPV after a prior HPV-associated malignancy, a systematic review and meta-analysis. Br J Cancer. 2019; 120: 256-268. DOI:10.1038/s41416-018-0273-9.

18. Campos Guzmán NR. Survival of patients with prostate cancer in a hospital in Bogotá, Colombia 2008-2014. Duazary. 2021; 18(3): 259-268. DOI:10.21676/2389783X.4238

19. Ruiz-Doria SC, Valencia-Jiménez NN, Ortega-Montes JE. Living conditions and coping strategies of women with breast cancer in Córdoba, Colombia. Annals of psychology. 2020; 36(1): 46-55. DOI:10.6018/analesps.351701.

20. Ruiz González P, Zayas A, Morales Sánchez L, Gil Olarte P, Guil R. Resilience as a predictor of depression in women with breast cancer. International Journal of Developmental and Educational Psychology[Internet].2019 [access:10/06/2023]; 4(1): 75-84: Available in:https://www.redalyc.org/articulo.oa?id=349861666008

21. García Regalado J, Quinde Rosales V, Bucaram leverone R, Sánchez Giler S. Epidemiological situation of cervical cancer in Ecuador, 2020. Veneolaa Journal of Oncology. 2021 [access: 10/06/2023]; 33(2): (approx. 12 screens). Available in: https://www.redalyc.org/articulo.oa?id=375665418004

Conflicts of interest

The authors report no conflicts of interest.

Authors' contribution

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Research: Melissa Sora Rodriguez, Lazaro Ernesto Horta Martinez

Methodology: Melissa Sora Rodriguez, Lazaro Ernesto Horta Martinez

Supervision: Melissa Sora Rodriguez, Lazaro Ernesto Horta Martinez

Writing – original draft: Melissa Sorá Rodríguez, Lázaro Ernesto Horta Martínez

Writing – review and editing: Melissa Sorá Rodríguez, Lázaro Ernesto Horta Martínez