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CLINICAL AND EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH CERVICAL CANCER AT A UNIVERSITY HOSPITAL IN PERNAMBUCO (2009-2018)

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ABSTRACT

The study aims to delimit a clinical and epidemiological profile of cervical cancer cases in patients residing in the state of Pernambuco between 2009 and 2018. This is a descriptive, retrospective, documental and quantitative study. It was observed that of the 775 patients, the median age was 40 years, most of the women declared themselves to be brown (61.8%), had not completed elementary school (31.4%), were from the metropolitan region

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of Recife (57.7%), had never consumed alcoholic beverages (46.3%), had never consumed tobacco (45.2%) and the marital status of the majority at the time of filling out the form was single (43.1%). Approximately 110 (14.2%) died. The most prevalent histological types of primary cervical cancer tumor were grade 3 cervical intraepithelial neoplasia (53%), squamous cell carcinoma (34.6%), and adenocarcinoma (3.2%). It was concluded that most of the women were from the metropolitan region of Recife, approximately 40 years old, single, brown and who had not completed elementary school, with a higher probability of being diagnosed with cervical cancer and evolving to death.

Keywords: Cervical neoplasms. Clinical epidemiology. Health education.

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INTRODUCTION

Cervical Cancer (CC) is a pathology caused by recurrent infections of oncogenic types of the Human Papilloma Virus (HPV) that affects the cervix, located at the bottom of the vagina, is a disease of slow evolution and has a good prognosis when its diagnosis is made early (OYUNI et al, 2023). It is considered a global problem due to its prevalence and mortality, especially in countries with low Human Development Index (HDI) indicators (SODERINI et al, 2020).

To act in carcinogenesis, HPV depends on proteins E6 and E7 that affect the action of tumor suppressor proteins and interfere with the cell cycle, causing an increase in cells with the possibility of developing cervical lesions. The development of these precancerous lesions depends on the infection of one or more HPV subtypes during reproductive age and impaired immune or hormonal status in the host (KUSAKABE et al. 2023)

INCA estimates indicate that between 2023 and 2025, 17 thousand people with a uterus will be affected by the disease, with emphasis on the north and northeast regions that have the lowest HDI rates in the country, attributing the title of the second most incident type of cancer, second only to breast cancer. In Pernambuco, the adjusted rate forecast for the three-year period from 2023 to 2025 was 12.14 people affected for every 100 thousand inhabitants, of which, approximately 1 person dies per day in the state (INCA, 2022).

Approximately 70% of cervical cancer cases are caused by HPV subtypes 16 and 18, resulting in a derangement in the cells surrounding the uterus (INCA, 2022). HPV can reach the anogenital tract and be classified as a low- or high-risk infection for the development of CC, depending on the type of virus associated with it (GISMONDI et al, 2020).

HPV has an incidence between 25% and 50% of the world's population, however, only a small portion progresses with the infection due to failures in the body's immune system (Inca, 2022). According to the origin of the cell derangement, the neoplasm can be classified as squamous cell carcinoma, which affects the squamous epithelium and has an incidence of approximately 90% of cases, and adenocarcinoma, which affects the glandular epithelium and represents about 10% of cases (INCA, 2021).

The incidence of cervical cancer is associated with the exposure of the population to factors that increase the chances of developing the disease, which can be minimized in the presence of actions aimed at early detection of the population at risk and including them in

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health education actions. This would also facilitate treatment, since the chances of cure are up to 100% for individuals who identified and treated the disease early (LI et al, 2022).

Nurses play an essential role in the detection of CHD, because through home visits, nursing consultations, and preventive exams such as Pap smears, based on COFEN Resolution No. 385/2011, they are able to detect the pathology early and follow up on treatment in a timely manner (OLIVEIRA et al, 2020).

Knowing the clinical and epidemiological profile is a useful tool for creating prevention and health promotion strategies. Thus, this study aims to delimit a clinical and epidemiological profile of cervical cancer cases in patients residing in the state of Pernambuco between 2009 and 2018.

METHODOLOGY

This is a descriptive, retrospective, documental and quantitative study that verified the clinical and epidemiological profile of patients affected by cervical cancer. The information analyzed was obtained through a database with retrospective data from the Hospital Cancer Registry (RHC) of the Hospital das Clínicas (HC/UFPE) from Dec/2023 to Feb/2024.

The HC/UFPE is a reference network in the state for medium and high complexity care, being a reference for the metropolitan macro-region I, which covers 72 municipalities along with 5 other services. Patients arrive by appointment through the state regulation system, or make the appointment in person through medical referral from other health units or even from other medical specialties within the HC-UFPE itself. The Hospital has an oncology ward where a total of 24 beds are available.

The study population was composed of records of registrations in the database of the Hospital Cancer Registry (RHC) of the Hospital das Clínicas of the Federal University of Pernambuco (HC/UFPE) between 2009 and 2018. The sample calculation was waived due to the analysis obtained in a census form, using a total of 775 patients.

The inclusion criteria were patients with confirmed cases of cervical cancer, residing in any municipality in the state of Pernambuco, divided into the metropolitan region of Recife and its area outside it, present in the RHC database in the year between 2009 and 2018. The exclusion criteria were patients without data regarding the municipality of residence in the RHC.

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Data collection was carried out through the consultation of HC/UFPE RHC records and was operationalized with the use of a form (APPENDIX A) built to be filled in with information based on existing epidemiological data.

For the analysis of sociodemographic data, descriptive statistics were performed with the calculation of absolute and relative frequencies for qualitative variables and dispersion measures with mean or median, standard deviation, maximum and minimum for quantitative. To verify the normality of the distribution of each of the quantitative variables, the Kolmogorov–Smirnov statistical test was used, adopting the value $p<0.05$. Descriptive and inferential statistics were performed using the Statistical Package for the Social Sciences (SPSS) software, version 30.0 for Windows.

The sociodemographic variables studied were: age, ethnicity, level of education, current marital status, and origin; The lifestyle variables were: smoking and alcoholism; The clinical results were: evolution to death and histological type of the primary tumor. The results were presented in table forms.

The study complied with the guidelines and criteria established in Resolution 466/12 and 510/2016 of the National Health Council (CNS), the ethical precepts established with regard to ensuring the legitimacy of information, privacy and confidentiality of information, when necessary, making the results of this research public, being considered throughout the process of construction of the work. The project was approved by the ethics committee (Opinion No. 6,280,044; CAAE 73432123400008807).

RESULTS

In the present study, it was observed that the median age was 40 years, most of the women declared themselves to be brown (61.8%), had not completed elementary school (31.4%), came from the metropolitan region of Recife (57.7%), had never consumed alcoholic beverages (46.3%), had never consumed tobacco (45.2%) and the marital status of the majority at the time of filling out the form was single (43.1%), As observed in Table 1.

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Table 1: Sociodemographic characterization of patients with cervical cancer treated at Hospital das Clínicas between 2009 and 2018. Recife/PE, 2024.

Variables	N	%
Current Marital Status		
Single	334	43,1
Married woman	172	22,2
Widow	60	7,7
Legally separated	31	4,0
Consensual union	111	14,3
No information	67	8,6
Total	775	100,0
Ethnicity		
White	149	19,2
Black	57	7,4
Yellow	4	0,5
Brown	479	61,8
Indigenous	3	0,4
No information	83	10,7
Total	775	100,0
Education Level		
None	94	12,1
Incomplete Elementary School	243	31,4
Complete Elementary School	115	14,8
Medium Level	134	17,3
Incomplete Higher Education	5	0,6
Complete Higher Education	21	2,7
No information	163	21,0
Total	775	100,0
Origin		
Metropolitan Region of Recife	447	57,7
Outside the Metropolitan Region of Recife	328	42,3
Total	775	100,0
History of Alcohol Consumption		
Never	359	46,3
Former Consumer	38	4,9
Yes	154	19,9
Not rated	55	7,1
Not Applicable	1	0,1
No information	168	21,7
Total	775	100,0
History of Tobacco Consumption		
Never	350	45,2
Former Consumer	87	11,2
Yes	143	18,5
Not rated	45	5,8
Not Applicable	7	0,9
No information	143	18,5
Total	775	100,0

	Median	Average	Standard deviation	Minimum value	Maximum value	p* value
Age (years)	40,00	42,51	13,39	17	108	<0.001

*Kolmogorov-Smirnov test

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Of the 775 patients, 110 (14.2%) died. The most prevalent histological types of primary cervical cancer tumor were grade 3 cervical intraepithelial neoplasia (53%), squamous cell carcinoma (34.6%), and adenocarcinoma (3.2%).

DISCUSSION

In addition to the oncogenic subtypes of HPV, cervical cancer may be related to the presence of several risk factors that contribute to the ideal conformation of the development of the pathology. Just as alcoholism is related to immunosuppression, which facilitates the development of the virus, smoking and the use of oral contraceptives help to increase metaplasia in the squamous transformation zone (LI et al, 2022)

Regarding the use of alcohol and tobacco, the participants in this study reported never having used these substances (respectively 46.3% and 45.2%), not corroborating the result of the study by Barros et al, 2022. The use of alcohol and tobacco associated with the oncogenic types of HPV favor the development of the disease, but the absence of these substances does not inhibit it.

Because cervical cancer is associated with HPV, which in turn has early sexarche and the multiplicity of sexual partners as risk factors, combined with misinformation, it is possible that they are related to the marital status of the patients in this study, who mostly declared themselves single (43.1%), corroborating the study by Oliveira et al, 2020, where most of the participants declared themselves without a partnership.

Indicators show that the brown/black population has less access to Pap smears and, consequently, there are more late diagnoses, revealing greater social inequality in the country. As a result, this study showed that the majority of women declared themselves to be brown (61.8%), which is in agreement with the study by Luiz et al. 2024, reinforcing the importance of facilitating the access of the brown/black population to the primary care service for Pap smears.

Socioeconomic conditions make it difficult to screen for early identification of injuries and treatment, as access for many users may be limited due to the distance from their homes to health units, violence, financial vulnerability, or even the execution of work activities during the opening hours of basic health units (PINEDA et al. 2020).

Regarding the level of education, the majority (31.4%) of the patients in this study stated that they had not completed elementary school, as seen in the study by Araujo et al 2023. An individual's level of education is directly related to the incidence of cervical

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cancer, since the lack of information means that the patient does not have information about risk factors and adequate screening tests.

The World Health Organization (WHO) has determined that at least 70% of women should be examined annually for the prevention of cervical cancer, however the Brazilian Institute of Geography and Statistics (IBGE) points out that Brazil is above average, with screening of 81.3%, while the northeast has the worst national average, with 76.4% (WHO, 2021; INCA, 2022).

Also according to the IBGE, Pernambuco has a number of 9% of women who did not take the preventive test with the justification of not finding it necessary (45%) or not having been advised about the need to perform it (14.80%) (INCA, 2022). A study conducted by Santos and Gomes et al 2022 found that pain, embarrassment, and shame are factors that make it difficult for women to undergo Pap smears.

Diagnosis consists of identifying signs such as vaginal bleeding after sexual intercourse, between menstrual periods or after menopause, foul-smelling or dark-colored vaginal discharge, palpable mass in the cervix, weight loss, and pain in the lower back or abdomen (JASPER et al. 2022).

The Pap smear is a specular test performed through the collection and analysis of JEC cells in the cervix, is offered by SUS, has a low cost and is indicated for people with a uterus in the age group between 25 and 64 years, active sexual life and interval of performance every 3 years, from 2 previous tests without alterations (FERREIRA et al. 2022).

The SUS, through a pilot project carried out in Pernambuco, acquired a technology for HPV screening through molecular testing, extending the screening interval to 5 years and facilitating the detection of cancer even earlier, in addition to making it possible to perform the self-test, without the need to undergo a pap smear. (KATZ, 2024)

The median age of the women in this study was 40 years, corroborating the study by Freitas et al. 2023, which presented the same result. Projections indicate that the incidence of cervical cancer occurs from 25 years of age, increasing its severity with advancing age, so the need for screening occurs between 25 and 64 years of age.

Most of the patients in this study were from the metropolitan region of Recife (57.7%), corroborating the study by Silva et al. 2020, which shows that this region has had better coverage rates for uterine cancer screening in recent years, reaffirming the importance of early diagnosis for better responses in the prognosis of the disease.

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The death rate found in this study was 14.2%, similar to the result of the study by Meira et al. 2023, which showed a rate of 13% of cases evolving to death in Pernambuco. According to data from DATASUS in 2023, for every 100 thousand inhabitants, 13.25 women were diagnosed with uterine cancer and approximately 1 person dies per day in the state (BRASIL, 2023).

To help reduce deaths caused by cervical cancer, the National Immunization Program incorporated into the national vaccine calendar, through technical note No. 41/2024, the adoption of a single dose of the HPV vaccine for people aged between 9 and 14 years and a 3-dose schedule for immunosuppressed people and victims of sexual violence (BRASIL, 2024)

Technical note No. 101/2024 establishes that users of pre-exposure prophylaxis (PrEP) aged between 15 and 45 years are entitled to receive the 3-dose vaccine schedule. These measures, associated with other existing means of prevention, aim to reduce the risk of cervical cancer by almost 80%, as happened in countries with high vaccine coverage in their population (BRASI, 2024)

Regarding the most prevalent oncological types of primary breast cancer tumor, first cervical intraepithelial neoplasia grade 3 (53%), followed by squamous cell carcinoma (34.6%) and adenocarcinoma (3.2%). On the other hand, Dellabeta et al. 2023 expose in their study that the most common types were squamous cell carcinoma, followed by adenocarcinoma.

Galvão, 2022 explains that uterine lesions originating in the cervical region are classified as low-grade squamous intraepithelial lesion (LSIL or CIN I), presenting cellular changes in one third of the lining epithelium; high-grade squamous intraepithelial lesion (HSIL, CIN II, or CIN III), affecting more than half of the squamous epithelium lining the cervix; carcinoma in situ (CIN III), affects the entire epithelial thickness; Adenocarcinoma in situ (AIS) are alterations similar to CIN III, but with great variation in shape, nucleus and size.

For precursor lesions, treatment must be individualized, depending on the lesion it will be performed surgically, or clinically with the use of creams or topical solutions. The treatment of CC will also be carried out according to the stage of the disease at the time of diagnosis, carried out through immunotherapies, chemotherapy, radiotherapy, surgical procedures, and emotional therapies (MENDONÇA et al. 2022; CARVALHO et al. 2021).

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Nurses play a fundamental role in the process of prevention and promotion of care with regard to cervical cancer. The various functions that the professional can perform, from public management, assisting in projects and actions that aim to facilitate the population's access to health equipment, to assistance, carrying out health education actions for the community, collecting exams and assisting in the treatment of those who need it.

To carry out this study, the loss of data, due to the incorrect and incomplete completion of the patient record, made it difficult to use more information that could have contributed to enrich the analysis and discussion of the theme. However, the lack of this information does not compromise the results, since a sociodemographic analysis was carried out with clinical data for a period of almost a decade, which may contribute to prevention and health promotion actions.

CONCLUSION

In our study, it was observed that most women were from the metropolitan region of Recife, aged approximately 40 years, single, brown and who did not complete elementary school, and have a higher probability of being diagnosed with cervical cancer and evolving to death, either due to difficulty in accessing health equipment or deficiency in the promotion of health education. generating a lack of knowledge of risk factors and means of prevention and diagnosis of cervical cancer.

The reduction in uterine cancer cases involves strategies aimed at preventive practices and improvements in patient access to the health system. Health education and awareness of the population about cancer and its forms of prevention are of paramount importance for increasing adherence to screening, reducing barriers created through deficient information, promoting universal and equitable access to health services. Continuous care, early detection, and acceptance of treatment favor cure and increase the survival rate, reducing the number of deaths caused by this condition.

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