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RESEARCH ARTICLE

CLINICAL-EPIDEMIOLOGICAL CHARACTERISTICS OF CERVICAL CANCER AT ERASMO MEOZ HOSPITAL BETWEEN 2015-2020.

CARACTERÍSTICAS CLÍNICO-EPIDEMIOLÓGICAS DEL CÁNCER DE CUELLO UTERINO EN EL HOSPITAL ERASMO MEOZ ENTRE LOS AÑOS 2015-2020

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RESUMEN

Objetivo: Identificar las características clínico-epidemiológicas de las pacientes del HUEM (HOSPITAL UNIVERSITARIO ERASMO MEOZ) con cáncer de cuello uterino en

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el periodo del 2015 - 2020 en relación con las estrategias de salud pública de vacunación y tamizaje. **Justificación**: el cáncer de cuello uterino en Colombia es la primera causa de muerte por cáncer entre mujeres de 30 a 59 años y a nivel mundial es el 4 tipo de cáncer más frecuente en las mujeres con 604.000 nuevos casos cada año y 342.000 muertes por año, siendo así una patología de importancia a la que se debe caracterizar su población y sus características clínico-epidemiológicas en la región. **Metodología**: se realizó una investigación observacional-descriptiva, cuya muestra estaba conformada en total 212 pacientes cuyos criterios de inclusión consistía en ser pacientes de ginecología oncológica en el HUEM con cáncer de cuello uterino en el periodo del 2015 – 2020 con edades entre los 20 y 50 años, y cuyos criterios de exclusión fueron el haber fallecido y no estar en el rango de edad de 20-50 años, cuyas variables de estudio fueron: edad, estado de vacunación, tamizaje, edad de inicio de las relaciones sexuales, uso o no de métodos de protección, diagnóstico y el tratamiento dado. **Resultados:** 132 pacientes tenían vacunación contra VPH, a 117 se les realizo tamizaje, 116 no usaban métodos de barrera en relaciones sexuales, 118 pacientes se diagnosticaron con tumor maligno del exocérvix (C531) y 56 con tumor maligno de endocérvix (C530), con respecto al tratamiento según el número de pacientes en cada esquema son: 35 en cirugía, 35 en radioterapia, 30 en quimioterapia, 27 en quimioterapia más radioterapia, 16 en cuidados paliativos y 31 sin tratamiento.

PALABRAS CLAVE: Cáncer, Virus del Papiloma Humano, Tamizaje Masivo.

ABSTRACT

Objective: To identify the clinical-epidemiological characteristics of patients at HUEM (ERASMO MEOZ UNIVERSITY HOSPITAL) with cervical cancer in the period 2015 - 2020 in relation to the public health strategies of vaccination and screening. **Justification**:

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cervical cancer in Colombia is the leading cause of cancer death among women aged 30 to 59 years and worldwide it is the 4th most frequent type of cancer in women with 604,000 new cases each year and 342,000 deaths per year, thus being an important pathology that must be characterized by its population and its clinical-epidemiological characteristics in the region. **Methodology**: an observational-descriptive research was carried out, whose sample was made up of a total of 212 patients whose inclusion criteria consisted of being gynecological oncological patients in the HUEM with cervical cancer in the period 2015 - 2020 with ages between 20 and 50 years, and whose exclusion criteria were having died and not being in the age range of 20-50 years, The study variables were: age, vaccination status, screening, age at the beginning of sexual intercourse, use or not of protection methods, diagnosis and treatment. **Results**: 132 patients were vaccinated against HPV, 117 were screened, 116 did not use barrier methods in sexual intercourse, 118 patients were diagnosed with Malignant Tumor of the Exocervix (C531) and 56 with Malignant Tumor of the Endocervix (C530), with respect to treatment according to the number of patients in each scheme are: 35 in surgery, 35 in radiotherapy, 30 in chemotherapy, 27 in chemotherapy plus radiotherapy, 16 in palliative care and 31 without treatment.

KEYWORDS: Cancer, Human Papillomavirus, Mass Screening.

INTRODUCTION

Human papillomaviruses (HPV) are the most common cause of viral infection of the reproductive tract. Most sexually active women and men will become infected at some time in their lives, and some people may have recurrent infections. More than 90% of affected populations successfully clear the infection. Cervical cancer is by far the most common disease caused by HPV. Almost all cases of cervical cancer can be attributed to HPV infection. In women with a normal immune system, cervical cancer takes 15 to 20 years to develop. In women with a weakened immune

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system, such as those with untreated HIV infection, it may take only 5 to 10 years (Pan American Health Organization PAHO 2018). Cervical cancer in Colombia is the first cause of death from cancer among women aged 30 to 59 years and worldwide is the 4 most frequent type of cancer in women with 604,000 new cases each year and 342,000 deaths per year, thus being a pathology of importance to which its population and its clinical-epidemiological characteristics in the region should be characterized (ministry of health and social protection, n.d.). In the present study, the main objective is to characterize the patients who attended gynecologic oncology oncology at HUEM with cervical cancer in the period 2015 - 2020; and the specific objectives are to identify the clinical characteristics of patients with cervical cancer who attended gynecologic oncology at HUEM in the period 2015 - 2020 and to determine the socioeconomic characteristics of patients with cervical cancer who attended gynecologic oncology at HUEM in the period 2015 - 2020.

THEORETICAL FRAMEWORK

In Colombia, cervical cancer is the leading cause of cancer death among women aged 30-59 years. By area of residence, the national incidence rate was 6.3 per 100,000 women over 18 years of age and the territories above this rate were Amazonas, Guaviare, Putumayo, Casanare, Caldas, Meta, Santa Marta, Huila, Arauca, Bogotá, Cauca, Caquetá, Valle del Cauca, Antioquia, Vaupés and Norte de Santander. This type of cancer has a causal agent in most cases: the human papillomavirus (HPV), where there are two types 16 and 18 that cause 70% of cervical cancers and precancerous lesions of the cervix, although the type of virus that generates the highest risk of developing in situ cancer or invasive cancer is HPV 16 (Instituto Nacional de Salud INS, 2018).

Cervical cancer mortality is associated with unfavorable socioeconomic conditions, with a higher risk of mortality

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found in dispersed rural regions, with low access to health services and in groups with lower educational levels. Cervical cancer is by far the most frequent disease caused by HPV. Almost all cases of cervical cancer can be attributed to HPV infection. In women with a normal immune system, cervical cancer takes 15 to 20 years to develop. In women with a weakened immune system, such as those with untreated HIV infection, it may take only 5 to 10 years (World Health Organization WHO, 2022).

HPV infection is one of the most common sexually transmitted infections in the world. Transmission usually occurs during sexual intercourse or skin-to-skin sexual contact with the person who has the virus. It can be transmitted even with the use of condoms and also in monogamous relationships. Almost everyone in the world is infected with HPV at least once during their lifetime. HPV resists desiccation and disinfection and can survive for a long time on the surface of objects. Therefore, it can be transmitted by infected objects or materials. It can also be transmitted by direct contact with wounds and abrasions and, in rare cases, from mother to child during childbirth.

It is not clear whether natural immunity develops after the first HPV infection. There is evidence that infection with a certain type of HPV may provide some protection for this same type, but not for different ones. Therefore, the HPV vaccine provides immunity and is an important tool for cancer prevention. The serological response after HPV vaccination is much stronger than the response after natural infection, which provides individuals with strong long-term immune protection against HPV.

Currently, the World Health Organization has approved four vaccines that protect against HPV types 16 and 18, which cause at least 70% of cervical cancers. The 9-valent vaccine protects against 5 additional cancer-causing HPV types, which cause an additional 20% of cervical cancers. Two of the vaccines also protect against types 6 and 11, which cause anogenital warts.

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Clinical trials and post-marketing surveillance have shown that HPV vaccines are safe and effective in preventing HPV infection, high-grade precancerous lesions and invasive cancer. The HPV vaccine works best if you receive it before you are exposed to HPV. Thus, to prevent cervical cancer, the World Health Organization recommends vaccinating girls between the ages of 9 and 14, before most of them have started having sex. Some countries are also starting to vaccinate boys, as vaccination also protects against male cancer caused by HPV.

However, HPV vaccination is not a substitute for cervical cancer screening. In countries where HPV vaccination has been implemented, population-based screening programs to detect and treat precancerous and cancerous cervical lesions are needed to reduce cervical cancer incidence and deaths (WHO, 2022).

Vaccination against HPV with the tetravalent vaccine began in August 2012; the target population was defined as girls in fourth grade of primary school, from all public and private educational institutions, who have reached nine years of age, with a schedule of three doses given in months 0, 2 and 6, each dose (national health institute INS, S.F).

Cervical cancer screening involves testing for HPV infection to find precancerous and cancerous lesions and then treating them as needed. If an HPV infection or precancerous condition is detected during screening, it can be easily treated to prevent it from developing into cancer. Screening can also indicate cancer in its early stages, which offers a good prognosis for cure. Women should generally be screened starting at age 30, with routine repeat testing every 5 to 10 years using an approved HPV test, and women living with HIV should be screened starting at age 25 (WHO, 2022).

The Argentine Society of Lower Genital Tract Pathology and Colposcopy (SAPTGIyC) recommends that colposcopy should be performed by professionals in lower genital tract

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pathology, taking into account factors such as tobacco use, immunocompetence status, lower genital tract infections and variations in the vaginal microbiome and should also consider whether or not there is a history of risk stratification such as: history of HPV testing within the last 5 years, history of cytology within the last 3 years, last cytology 4 or more years ago or no previous cytology, vaccination for HPV, and history of treatment for H-SIL or GIT cancer within the last 25 years (Toziano et al., 2022).

The best way to prevent HPV is to get vaccinated before having sex. Similarly, while using condoms can transmit HPV, using them during sex can help prevent the spread. To prevent cervical cancer, the World Health Organization recommends that all women between the ages of 30 and 49 have at least one cervical cancer screening with a health care provider (even if they have previously received the HPV vaccine).

Vaccination against HPV is indicated and included in the official schedule for individuals aged 11 years (it can be used from the age of 9 years), with a 2-dose schedule for children under 15 years (0-6 months). After 15 years of age, a 3-dose schedule (0-2-6 months) should be used, with catch-up until 18 years of age. HIV (+) and/or transplanted patients should receive a 3-dose schedule regardless of age. Those who have started the vaccination schedule, but have not completed it, may do so by applying the missing doses, always respecting the indicated interval of at least 2 months between the first and the second dose and 4 months between the second and the third dose (Toziano et al., 2022).

It is recommended to start screening 3 years after the onset of sexual activity in all individuals with cervical cancer, regardless of gender. It could eventually be started earlier, according to the criteria of the treating physician. Immunosuppressed and HIV (+) individuals should start screening one year after the beginning of sexual intercourse. We know that the existence

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of a persistent infection by a high-risk HPV is essential for the development of a cancer precursor lesion, while transient and self-limited infections are very frequent. For these reasons, it is not advisable to start screening before this time (Toziano et al., 2022).

There are two screening modalities: primary screening with HPV testing with or without genotyping (HPV 16-18) and cytology alone; it should also be noted that HPV testing is not recommended for children under 30 years of age, given the high prevalence of transient infections in this group, and it is not recommended for pregnant women (Toziano et al., 2022). Up to and including 29 years of age, cytology is recommended, with an annual interval, and after 2 negative cytologies, it can be changed to an interval every 3 years. In patients with HIV (+), transplant recipients and immunocompromised patients, the annual interval should be maintained; in patients older than 30 years, screening with HPV test is recommended; if the test is negative, it can be repeated after 5 years and if it is positive, cytology classification can be performed. If the test is negative in immunosuppressed and HIV (+) patients, it should be repeated every 3 years.

In the absence of molecular testing, screening with cytology alone is acceptable, continuing with the annual interval and after 2 negative tests, moving to an interval every 3 years. The annual interval will be maintained in HIV (+), transplanted and immunocompromised individuals (Toziano et al., 2022).

It is recommended to complete screening in patients older than 65 years when screening is performed with HPV testing, and in patients older than 70 years, when screening is performed only with cytology, in addition to special cases such as patients hysterectomized for benign pathology and without a history of intraepithelial lesions. This applies to patients without immunocompromise, in the absence of diagnosis of high-grade/glandular intraepithelial lesions in the last 25 years, and who have presented negative screening in the last

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10 years (2 negative HPV tests or 3 negative cytologies).

If treatment of precancerous lesions is required and eligibility criteria are met, ablative treatment with cryotherapy or thermal ablation is recommended. Both treatments are equally effective and safe and can be administered on an outpatient basis. If ablative therapy is not available or cervical cancer is suspected, the woman should be referred to the appropriate health care system for appropriate evaluation by colposcopy and biopsy.

When a woman develops symptoms of cervical cancer, she should be referred to an appropriate center for evaluation, diagnosis and treatment. Some early symptoms of cervical cancer include: irregular or light spotting between menstrual periods in women of reproductive age, postmenopausal spotting or bleeding, bleeding after intercourse, increased vaginal discharge, sometimes with a foul odor, and other intense symptoms may appear in advanced stages, depending on the organs to which the cancer has spread.

The diagnosis of cervical cancer should be made by histopathological examination. Staging is determined by the size of the tumor and the spread of the disease. The therapeutic plan depends on the stage of the disease, and the options are surgery, radiation therapy and chemotherapy. Palliative care is also an essential element of cancer management to relieve unnecessary pain and suffering due to the disease.

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METHODOLOGY

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An observational - descriptive study was conducted, whose population was a total of 424 patients, whose inclusion criteria were to be patients of the gynecology oncology service in the HUEM with cervical cancer in the period from 2015 - 2020, to whom the following exclusion criteria were applied: having died, not being in the age range of 20-50 years and having other diagnoses different from C530 and C53, leaving with a total sample of 174 patients; whose study variables were: age, vaccination status, screening, age of onset of sexual intercourse, use or not of protective methods, diagnosis and the treatment given.

The project was approved by the ethics committee of the HUEM and the medical program of the University of Pamplona. No commercial benefit will be obtained from the project and no external funding was received for its implementation.

RESULTS AND DISCUSSION

A total review of the sample showed that 78% of the patients were Colombian, while 22% were Venezuelan (Figure 1); in addition, 42 patients (24%) had been vaccinated against HPV, while 132 patients (76%) had not (Table 1); 117 patients (67%) had access to screening, and 57 patients did not (33%) (Table 1) (Figure 2); 58 patients (33%) used barrier methods, and 166 patients (67%) did not (Table 1); 56 patients (32%) were diagnosed under code C530, and 168 patients (68%) under code C531 (Table 1); Regarding the treatments used, it was determined that 35 patients (20%) underwent surgery, 35 patients (20%) underwent radiotherapy, 30 patients (17%) used chemotherapy, 27 patients (16%) underwent combined radiotherapy and chemotherapy, 16 patients (9%) were given palliative care, and 31 patients (18%) did not receive treatment (Table 1) (Figure 3).

Table 1. *Clinical-epidemiological characteristics of cervical cancer in the Erasmo Meoz hospital between the years 2015-2020.*

Variables	Features	Populatio n

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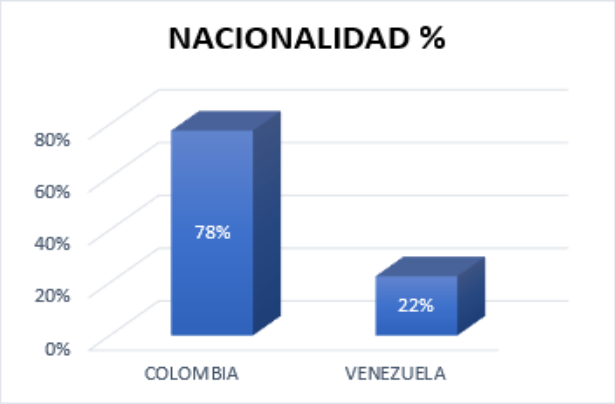
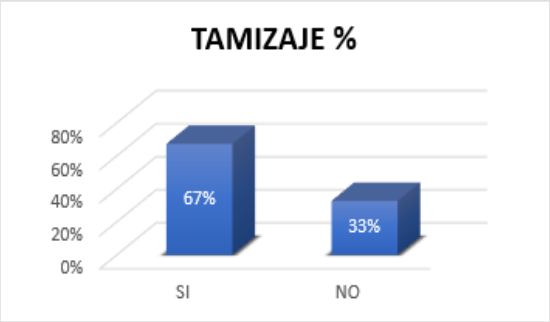
Age	20- 50 years	174
HPV Vaccination	YES	42
	NO	132
Screening	YES	117
	NO	57
Initiation of sexual relations	Between 15 - 20 years of age	174
Protection	YES	58
	NO	116
Diagnosis	C530	56
	C531	118
Treatment	Surgery	35
	Radiotherapy	35
	Chemotherapy	30
	Chemotherapy plus Radiotherapy	27
	Palliative care	16
	No Treatment	31

Patients of the gynecologic oncology service at HUEM with cervical cancer in the period 2015 - 2020 according to their nationality.



Patients of the gynecologic oncology service at HUEM with cervical cancer in the period 2015 - 2020 according to HPV screening tests.



Patients of the gynecologic oncology service at HUEM with cervical cancer in the period 2015 - 2020 according to the treatment scheme used.

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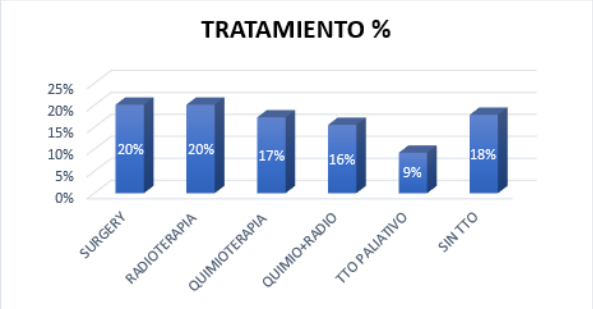

CONCLUSIONS

In the majority of the population studied, it was evident that the lack of education and knowledge led many patients to consult only when the symptoms were already severe, without opting for primary or secondary preventive methods. On the one hand, due to the fact that most of these women are migrants, they did not have access to health services, and on the other hand, they were unaware of the risks of this pathology.

Most of the women do not take primary and secondary prevention treatment and therefore their cancer is detected at an advanced age. In some cases where patients died, it was due to not taking the treatment or late initiation due to administrative problems. The socioeconomic conditions of the patients influence prevention, detection and subsequent treatment. Non-use of protection in sexual relations can be considered one of the main causes of HPV infection and subsequent progression to cancer.

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