Investigating precursor lesions of cancer of the uterine cervix in a town in Rio Grande do Norte

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Objective: To identify the types of precursor lesions of cervical cancer more prevalent in women living in a rural area of São José de Mipibu, Rio Grande do Norte, Brazil. Method: This study is of an exploratory-descriptive nature, designed in the form of documentary research. The sample comprised women who underwent oncotic cytology in the Health Unit of the studied community, 2005 to 2009, totaling 782 women. Results: Considerations were made about the microbiology, diagnosis and descriptive of cellular atypia distributed by age found in the results of oncotic cytology, with subsequent reflections on the role of nurses in the prevention of cervical cancer. Conclusion: We conclude that the prevention of cervical cancer still remains a challenge for women’s health.

Descriptors: Uterine cervical neoplasm, cervix neoplasm prevention, Nursing.
INTRODUCTION

Cancer of the cervix is considered a public health problem, affecting all social classes and geographic regions. This cancer accounts for approximately 15% of all types of cancer occurring in women worldwide. In the present scenario of health, we can say that the increase of cervical cancer becomes a common reality for women in Brazil and worldwide.\(^1\)\(^2\)

According to the Ministry of Health, are recorded annually about 471,000 new cases of this cancer. Almost 80% of them occur in developing countries, where in some regions, is the most common type of cancer among women.\(^3\)

According to the National Cancer Institute (INCA), it is estimated that cervical cancer in Brazil is the second most common malignancy among female population - behind only breast cancer - and the fourth leading cause of death for women cancer in Brazil: a year, this neoplasm is 4800 fatalities.

The number of new cases of this type of cancer expected for Brazil in 2011 is 18,430, with an estimated risk of 18 cases per 100,000 women contingent. Excluding the non-melanoma skin tumors, cancer of the cervix is the most frequent in the North (23/100,000). In the Midwest (20/100,000) and Northeast (18/100,000), type of cancer in question ranks second most frequent, in the South (21/100,000) and Southeast (16/100,000), the third position.\(^4\)

It reaffirms the importance of this issue through the series published by the Ministry of Health about this neoplasm, which includes data ranging from 1979 to 2005. During this period, mortality rates adjusted for age increased from 4.97 to 5.29 per 100,000 women, representing an increase of 6.4% in 26 years.\(^5\)

Associated with cancer are Sexually Transmitted Diseases (STDs) as important contributors to make cervical cancer a problem of global public health. Are diseases caused by various etiological agents that have in common the transmission. In general, occur through sexual contact without condom use with someone who is infected.

Given this context, Brazil is considered by the World Health Organization of the areas of high risk for cervical cancer. In view that women are the majority of the population (over 93 million) and the main users of the Unified Health System, one can understand the extreme importance of the epidemiology of cervical cancer in the country, since the population likely is highly contingent, requiring an urgent prevention work of health professionals, especially nurses.\(^3\)

This professional has a key role in the prevention of this cancer and carries out preventive measures in assisted communities in order to identify high-risk populations and develop a work committed to the promotion of Comprehensive Health of Women, which is a strategic area of work, according to the Health Pact, regulated by Ordinance No. 399 GM / MS, 2006.

In this context, it is noteworthy that, in the practice of protecting health in primary and secondary scopes, regarding the aforementioned type of cancer, are key actions that refer to the Pap smear for detection in situ or precursor lesions, treatable and curable, adopted by screening programs of cervical cancer, leaving it to professional nursing activities to develop user awareness about the periodical testing as a way of preventing morbidity and assist in the processing of cases in the early stages, the positive prognosis.

It is imperative to be aware that, with the exception of skin cancer, cervical cancer is a malignancy that presents the greatest potential for prevention and cure when diagnosed early. It is estimated that a reduction of about 80% in mortality from this cancer can be achieved through...
screening of women aged 25-65 years with Pap smears and treatment of precursor lesions with high potential for malignancy or carcinoma in situ.4

Acting in preventing cancer of the cervix, at all levels, is therefore fundamental action of all health professionals, with emphasis on the nurse, who, through the Nursing Consultation, practices can foster educational priority consolidation of this process. In this regard, it is noteworthy that the profile of the users served by the Health Unit primary action is to act in a meaningful and effective in promoting activities to prevent cervical cancer.

Given the above, it was established as the guiding question of this study, inquire about what the precursor lesions of cervical cancer more prevalent in women living in a rural area of São José de Mipibu, Rio Grande do Norte, Brazil. The choice of this location was due to activities of a scientific nature developed by researchers in the municipality in question, and such a study subsidized health practices components curricular activities of the authors.

Plus, before the epidemiological relevance of cervical cancer nationally and globally; unquestioned respect of STDs as risk factors for the development of neoplasia above, and the importance of knowing the profile of users accompanied by multidisciplinary health care team to establish priority actions which might relate to the prevention of cervical cancer, it is emphasized that the study aims to identify the types of precursor lesions of this cancer more prevalent in women living in a rural area of São José de Mipibu, Rio Grande do Norte, Brazil.

METHODOLOGY

This is a study of exploratory and descriptive nature, designed in the form of a documentary research, with the primary source of the data register of Preventive Unit of the Family Health Strategy (FHS) in rural town São José de Mipibu -RN, where the authors developed scientific activities components Undergraduate course in Nursing.

The data collection instrument had information such as age, date of collection, date of sample and result, and the filling of the information contained in this book was done by the nurse responsible for collecting material from the cytology of the unit in question.

To perform this analysis, the sample comprised women who underwent cytology this Unit Family Health, from 2005 to 2009, totaling a contingent of 782 women.

The choice for the analysis of five years of such records was made by the short time in which the study was raised and considered that, by drawing an epidemiological profile of the population analyzed, will be taking the first step to effectuation of future comparisons through time analysis - consideration that should be part of the work of the teams of the Family Health Strategy.

The descriptive analysis of the records was performed in March and April 2010 by the researchers, using the program Microsoft Office Excel 2007 for data tabulation.

It is worth emphasizing that the study was guided by the principles governing research involving human subjects, as described in Resolution 196/1996 of the National Health Council. The study was evaluated and received a favorable direction of the Basic Health Unit assessed. Furthermore, it is emphasized that the data analyzed consist of data without mentioning the name of the users, thus preserving the anonymity of these, since it is therefore documentary data analyzed
without user identification. The term Custodian, signed by the Municipal Secretary of Health of São José de Mipibu, approving the research, is attached.

**RESULTS AND DISCUSSION**

This study was conducted in a Family Health Unit (FHU) located in the countryside of São José de Mipibu, Rio Grande do Norte, Brazil. This city, formerly known as Vila de São José do Rio Grande, was elevated to city status on October 16, 1845, and is located 41 km from Natal, Natal, distributed in an area of approximately 294 km², being 44.69% in urban areas and 55.31% in rural area.

São José de Mipibu, which has an estimated population of 38,406 inhabitants, and 19,320 females, was awarded in 2000 with the implementation of the Family Health Strategy (FHS), Oral Health and Support Center for Family Health (NASF). The ESF, this city, has 16 teams, and 46 micro areas of urban and 56 rural. According to the Report of the Information System of Primary Care, there are 38,595 people registered in the county and, in particular location of our study, reside approximately 1724 inhabitants, 898 males and 826 females.

Of these, 782 women were aged from 15 to over 60 years of age, becoming thus the target population cytology in the study unit.

After tabulating the absolute and relative frequencies of cytology results of 782 women who underwent such an examination in the period from 2005 to 2009, the Family Health Unit study, we proceeded to analyze these with discussions about important pillars contribute to the development of cervical cancer.

By way of comparison, it will use this estimate of women as a given standard of review for the five years of study, understanding that this total of users should hold yearly cervical screening.

Table 1 presents the results of microbiology preventive exams performed during time of study, distributed by age.

<table>
<thead>
<tr>
<th>Microbiology</th>
<th>15 a 19</th>
<th>20 a 39</th>
<th>40 a 49</th>
<th>50 a 59</th>
<th>&gt;60</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Lactobacillus sp.</td>
<td>28</td>
<td>48</td>
<td>170</td>
<td>47</td>
<td>33</td>
<td>32</td>
</tr>
<tr>
<td>Gardnerella</td>
<td>14</td>
<td>24</td>
<td>82</td>
<td>23</td>
<td>35</td>
<td>34</td>
</tr>
<tr>
<td>Cocos</td>
<td>5</td>
<td>9</td>
<td>74</td>
<td>20</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>Candida sp.</td>
<td>11</td>
<td>19</td>
<td>27</td>
<td>7</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Trichomonas</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chlamydia sp.</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100</td>
<td>361</td>
<td>100</td>
<td>104</td>
<td>100</td>
</tr>
</tbody>
</table>

Initially, it is essential to analyze the amount of preventive tests performed: 592 examinations in five years. As a means of comparative analysis, one can estimate that approximately 118 examinations were performed annually. If you build on that in 2009, 782 women were part of the female population of childbearing age, it is concluded that, ominously, only 15% of that amount held such an examination, which represents a very small coverage.
In this context, according to the Ministry of Health Manual Control of Cancers Cervical and Breast, conducting periodic preventive screening of cervical cancer is the most effective measure for the control of precursor lesions, thus contributing to prevent the development of cancer.\textsuperscript{3} Furthermore, it is stated that “having well-defined steps and slow evolution, cancer of the cervix allows its interruption from early diagnosis and timely treatment at reduced costs”.\textsuperscript{7,297}

However, the analyzed data reveal a troubling problem: the discovery of a large number of women unaccompanied by health services - which directly and negatively influences the early diagnosis of precursor lesions of cervical cancer, preventing thus the effectiveness of practices to protect the health of those users.

Given this, it should be emphasized that the need is notorious for encouraging practices of health education for the rescue this population, ensuring even adequate monitoring as a means of promoting health practices accumulative.

Regarding the results of microbiology, there is the highest percentage of exams with suggested Lactobacillus sp., Representing 43% of total examinations, over age group, in which 170 examinations (67% of total) were in the range of 20 to 39 years of age.

The Lactobacillus sp. Are gram-positive rods that form part of the normal vaginal flora of women in the reproductive phase, reducing the vaginal pH and exerting a protective effect against the growth of potentially harmful microorganisms to balance their ecosystem.\textsuperscript{8}

Later, one realizes, in that Table, 121 women who had tests suggestive of the presence of Coconuts (20% of total), One can also see that 63% of patients had results considered by the Ministry of Health as normal findings, with microorganisms that part of the vaginal flora and does not characterize infections requiring therapy.

Of 592 cytology tests performed, 218 (37%) had findings suggestive of precursor lesions of cervical cancer (Gardnerella vaginalis, Candida sp., Trichomonas vaginalis and Chlamydia SP), requiring, therefore, treatment and monitoring team health.

The results suggestive of Gardnerella vaginalis, in turn, had, on the one hand a reduction in women aged over 50 years, only nine of the total of 140 scans with such agent (6%), and, secondly the maintenance of a percentage increase in the age group 20 to 39 years, with 82 users with such problems (59%).

It is worth emphasizing that bacterial vaginosis is the main cause of vaginal discharge infectious in nature and is responsible for approximately 40 to 50% of all cases being considered a polymicrobial syndrome characterized by massive increase of anaerobic bacteria and a decrease in the number of Lactobacillus.\textsuperscript{9}

54 results were also observed suggestive of vaginal candidiasis (9%), especially for the age group 20-39 years (27 tests positive for Candida sp., le 50%). It is emphasized that vaginal candidiasis is caused by fungi that live in the digestive and vaginal mucosa, affecting women from all over the planet, with no news today that some people do not bother to manifest this. Appears when the resistance of the organism decreases or when the vaginal resistance is decreased. Some factors are contributing to the emergence of this fungal disease, namely antibiotics, pregnancy, diabetes, infections, immune deficiency, medications like contraceptives and steroids. It is surely one of the most common diagnoses in everyday practice in health. It is believed that about 75% of adult women have at least one episode of fungal vulvovaginitis in your life and that 40 to 50% will have another outbreak.\textsuperscript{9}

The Trichomonas vaginalis was recognized as a diagnosis in 10 cytopathology suggestive, and, of that total, six were aged 20 to 39 years (60%).
Trichomoniasis is a sexually transmitted disease, curable, non-viral etiology, common worldwide and is caused by flagellated protozoan parasite that the human gastrointestinal tract, with high prevalence, manifesting with diarrhea and epigastric pain. The contamination is fecal and oral and most infected individuals are asymptomatic, ie only removes protozoan cysts in the stool. However, infection with this parasite by causing intense inflammatory process can facilitate the acquisition and transmission of human immunodeficiency virus (HIV).9

The result suggestive of Chlamydia sp. was observed in 14 tests, especially for the age groups 50-59 years (36%), 40-49 years (29%) and in women over 60 (21%). It is known that chlamydia has a peculiar development cycle, which differentiates it from other bacteria. This cycle initially involves the infection of a susceptible host cell through a process of phagocytosis specific for chlamydia. The infectious assault which arises from a tissue or group of tissues, suffers due to the action of a specific microorganism. It is a sexually transmitted disease (STD) caused by the bacterium Chlamydia sp., it affects the genitals and male or female can produce spores, which makes easier its spread.9

It appears, therefore, that the age group of 20 to 39 years showed a different pattern in all diagnoses, with greater positivity for the other, to be classified as a sexually active age group. This track, it should be emphasized, is to sample with the highest number of examinations (61% of all cytology), which represents a greater demand for Unity Family Health, in contrast to other age groups.

Table 2 presents the descriptive diagnostics distributed by age in the results of cytology health unit analyzed.

<table>
<thead>
<tr>
<th>Descriptive Diagnosis</th>
<th>15 a 19</th>
<th>20 a 39</th>
<th>40 a 49</th>
<th>50 a 59</th>
<th>&gt;60</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within the bounds of normality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflammation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immature squamous</td>
<td>1</td>
<td>10</td>
<td>16</td>
<td>3</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>Metaplasia</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Atrophy with inflammation</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Benign cellular changes</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Active metaplastic cell</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

As seen in Table 2, only four tests were within normal limits, ie, 98% had some type of change, whether benign or atypical cells.

Among these changes, there is the immature squamous metaplasia, with 82 diagnostic tests, and these samples showed increased results in the age group 20-39 years (65%) and 40-49 years (18%).

The word immature features a presentation considered inflammatory with epithelium that stage revealing himself vulnerable to the action of precursor lesions of cervical cancer. There was a significant increase in both age groups said, because women are more likely to be sexually active.

Finally, we present the results of cellular atypia distributed by age groups found in the results of cytology drive analyzed in Table 3.
Table 3 - Atypical cellular distributed by age, found in the results of cytology unit analyzed in the period from 2005 to 2009, São José de Mipibu, Rio Grande do Norte, Brazil, 2010.

<table>
<thead>
<tr>
<th>Cell atypies</th>
<th>15 a 19</th>
<th>20 a 39</th>
<th>40 a 49</th>
<th>50 a 59</th>
<th>&gt;60</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>HPV + NIC-I</td>
<td>2</td>
<td>67</td>
<td>12</td>
<td>79</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>NIC-I</td>
<td>1</td>
<td>33</td>
<td>2</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NIC-II e NIC-III</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>100</td>
<td>15</td>
<td>100</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

It is observed that HPV + CIN-I is the main type of alteration found (84%). It is known that the Human Papilloma Virus (HPV) is a DNA epithelium-trophic virus, which is linked to cervical carcinogenesis through laboratory and epidemiological evidence.8

Currently, it is considered that infection with Human Papilloma Virus (HPV) is the main factor for the development of cervical cancer, infection is also associated with low socioeconomic status, ie, groups that have greater social vulnerability.9 Importantly, "the viral infection by high-risk types of HPV is necessary but not sufficient for the development of cervical cancer."10:124

Thus, it is worth noting that there are factors that will contribute to changes occur prevalence of HPV infection in the population. As these factors include: the number of sexual partners during their life and habits of the partners and their ages, and there is a proven risk elevation, the greater the age of the partner. Studies show that the higher prevalence rates are found in women younger than 25, with progressive linear decrease after this age, reaching values below 5% after 55 years old.10

Usually, the HPV infection affects young people at the start of sexual activity - a transient phenomenon in 80% of cases. However, a small fraction of women have persistent infection, probably due to immunological mechanisms, which can cause changes in cervical epithelium and malignant transformation.10

Worryingly, in Brazil is estimated that there are nine million people are infected with HPV, which can be considered a sexually transmitted infection more common, due to the increase in incidence worldwide, and is therefore an epidemic. One in four normal adult women, especially younger women, between 20 and 24, have the virus in the genital region.11

In this context, the risk group that deserves special attention by the multidisciplinary health care team is the women that have persistent infection with high-risk viral types of HPV, which will feature a predisposing factor for the development of cervical cancer uterus.

Given the above, we agree with the idea that the understanding of the epidemiology of genital HPV infection is an important step in the development of preventive strategies for this infection and, consequently, to decrease cervical cancer.10

In the analyzed period from 2005 to 2009, there was only one reported case of cancer of the cervix in rural USF in question. In the results presented of cellular atypia, much of the high incidence of cases shows a percentage distributed aged 20 to 39 years old, showing once again that the changes are present in the sexually active age groups and in the reproductive age group, focusing on those women over 35 years, with peak incidence between 45 and 49 years. However, there has been an increased incidence in younger women, aged 20 to 39 years of age.9

It is essential, however, to emphasize the extreme fragility of the data in the correct analysis of the epidemiological reality of women served by USF São José de Mipibu, since the rate of
achievement of oncotic cytology presents much lower than desired, with approximately 15% of the total population expected.

The data analyzed reveal therefore a worrying situation: a large number of users without any gynecological and a large number of diagnoses of precursor lesions of cervical cancer.

In preventing cancer of the cervix, the nurse shall constitute itself as the integrator of care actions, which is understood by the practices of promotion, protection and recovery of health, recommended by the Health Law N° 8080, from September 19, 1990. The Nurse in Primary Care (AB), especially in the Family Health Strategy (FHS) is the professional who must seek understanding of epidemiological data, emphasizing the territory as a mirror of reality and community as one of the pillars of the new care model: the health surveillance.12

At this level of health care, the service components must build the following actions:

1) health promotion, encompassed by educational practices related to the topic of cervical cancer, explaining its definition, the conditioning factors, forms of protection - emphasizing the practice of safe sex, since studies show transmission of HPV as an important cause of malignant lesion, and early diagnosis of this, activities that can be supported by extramural intersectionality;

2) protecting health, through Pap screening, also known as “smear cytology” or “Pap”, which makes early diagnosis of the disease and detect the installation of the HPV virus, consolidating thus reducing deaths from cervical cancer by 70% since its inception by Dr. George Papanicolau in 194013; and

3) referral for high and medium complexity, where the presence of cancer or precursor lesions of this disease, paying attention to the counter-local and responsibilities for following the treatment plan established by reference.

Therefore, it is a sine qua non involvement of all Multidisciplinary Team, in particular the Community Health Agent (CHA), which operates under the guidelines of the Nurse and is community-builder links UBS, allowing ensure longitudinality, understood as Regular intake of care provided by the Health Team.

Given this, it is clear the importance of the nurse in the practice of care for women, enabling the development of blocking actions of physiological changes, in addition to ensuring access to screening and treatment in specialized services.

It is imperative to highlight the need to systematize actions to prevent cervical cancer, understanding that, through a systematic care, the nurse is able to offer subsidies for the development of interdisciplinary actions and humanized care, establishing conceptual presuppositions able to rescue the intrinsic scientific aspects of nursing care, since “the use of a conceptual framework underlies the activities performed, mischaracterizes the technicality and repeat routine actions”.

Another key element of care provided by systematization appears as the rescue of individualized care, in view of the holistic approach and the resulting user humanization of its care process, because, in the everyday practice of nursing is essential “see with physical eyes and with eyes of the heart, the unspoken understanding, trust ear, socialize knowing and doing, reflect on the experiences, seek self-knowledge and to act promptly and wisdom”.

Redeem the humanescence in clinical nursing prevention of cervical cancer is therefore a fundamental condition for the effectiveness of health programs, since the host should be the starting point for comprehensive and longitudinal care in order to meet the complex health needs of the users that often are not restricted to the biological.

This professional must also act in the execution of works related to the promotion and training of nursing staff and the Community, in order that they might act as multipliers in improving the quality
of life. Nurses still expected that this fosters a work of guidance on the test technique, demystifying it, to the point of being understood as a routine action of every woman.

With the completion of these assumptions, this professional make real control of cervical cancer by subtracting the number of new cases and deaths caused by the disease, as is knowledge of the scientific and the popular high potential for healing through the early diagnosis. Note that this intent is established by the plan targets set by the Pact for Life, an aspect that allows the realization of the mission of social work and nurse.

CONCLUSION

A critical analysis of the data analyzes showed that there is still a small number of women who do take cytology in the study area - perhaps because they ignore the reason why it is done, the myths and taboos surrounding cancer of the cervix or which are not oriented as to their periodicity.

Thus, the prevention of cancer of the cervix still constitutes a challenge to women's health, putting in relief that the performance of health professionals should improve adherence of women to the proper enforcement of prevention of precursor lesions that type of neoplasm.

It is worth mentioning that there are many factors for not having a cervical smear for women, among them, the lack of knowledge about the prevention, meaning cancer of the cervix for these and fear of the result.

Therefore, it is believed that only a multidisciplinary health care team may treat the customer as a subject, trying to find space for the expression of their feelings, respect it and engage with it, putting yourself in their place, the point eventually develop a bond, and, finally, consider seeking social history, cultural, family and religious.

We assert that women’s Strategy Unit Family Health of São Jose de Mipibu are exposed to risk factors for this cancer and its precursor lesions, and in no way differ from women in other regions of Brazil and the world. It is noteworthy that the frequency of cell damage is high, showing the need to promote a specific care program for sexually active women age; otherwise it will have resulted in a gradual increase of cases of cervical cancer, with great social impact.

The results of this study serve as input to a reflection on not only nursing in preventing cancer of the cervix, but the Nursing Network on Public Health, its importance and its autonomy, causing it to come to reflect on the professional role of this sector in improving the quality of life of population, by consolidating the principles and guidelines of the Brazilian Unified Health System.

REFERENCES
