Original Article

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Evaluation of Cytopathological Findings of the Cevix performed at a BHU between 2020-2021

Avaliação dos achados citopatológicos do colo do útero realizados em uma UBS entre 2020-2021

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Abstract

Introduction: In the face of a pandemic scenario, anxiety and concern have arisen among health services, including Primary Care. Because it was necessary to reorganize the service flow in the Basic Health Units (BHU), which, in addition to promoting the fight against the pandemic and transmission prevention measures, also had the essential activities inherent to this point of the network limited. In this sense, women's health was one of the areas affected, namely by the limitation in routine screening tests for Cervical Cancer (CC). **Objective:** To describe the cytopathological findings found in the reports of exams performed between 2020 and 2021 and their main changes. **Methods**: This research is a cross-sectional, documentary, descriptive-exploratory, retrospective study with a quantitative approach. The variables analyzed were those contained in the report of the Cytopathological Examination of Cervix Cancer using the statistical program Statistical Package for Social Sciences (SPSS) version 20.0. **Results**: By analyzing the reports of altered cytopathological exams of women between 2020 and 2021, it was possible to observe an alteration in 10.9% (29) of the reports. By using n=29, the prevalence of ASC-H (34.5%), followed by HSIL (27.6%), ASC-US (24%), LSIL (6.9%), AGC (3,5%) and HSIL-MICRO (3.5%) of the total number of altered exams. **Conclusion**: The situational diagnosis shows that Cervix Cancer Prevention (CCP) coverage needs to be improved to ensure adequate diagnosis for women and the achievement of better health indicators, thus reducing the incidence of mortality from this type of cancer in women.
Keywords: primary health care; cervical intraepithelial neoplasia; pap smear test

Resumo

Introdução: Diante de um cenário de pandemia, a ansiedade e a preocupação se instauraram entre os serviços de saúde, incluindo na Atenção Básica. Pois fez-se necessário a reorganização do fluxo de atendimento nas Unidades Básicas de Saúde (UBS), que, além de promover o enfrentamento à pandemia e medidas de prevenção de transmissão, também teve as atividades essenciais inerentes a esse ponto da rede limitados. Nesse sentido, a saúde da mulher foi uma das áreas afetadas, a saber pela limitação na rotina de exames de rastreamento de Câncer do Colo de Útero (CCU). **Objetivo:** Descrever os achados citopatológicos encontrados nos laudos dos exames realizados entre 2020 e 2021 e suas principais alterações. **Métodos:** A presente pesquisa constitui um estudo transversal, documental, descritivo-exploratório, retrospectivo e com abordagem quantitativa. As variáveis analisadas foram aquelas contidas no laudo do

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Exame Citopatológico do Câncer do Colo de Útero por meio do programa estatístico Statistical Package for the Social Science (SPSS) versão 20.0. **Resultados:** Analisando os laudos dos exames citopatológicos alterados das mulheres entre 2020 e 2021, foi possível observar a presença de alteração em 10,9% (29) dos laudos. Ao utilizar n=29, verificou-se a prevalência da ASC-H (34,5%), acompanhado de HSIL (27,6%), ASC-US (24%), LSIL (6,9%), AGC (3,5%) e HSIL-MICRO (3,5%) do total de exames alterados. **Conclusão:** O diagnóstico situacional evidencia uma cobertura de PCCU que precisa melhorar para garantir o diagnóstico adequado para mulheres e alcance de melhores indicadores de saúde, reduzindo assim a incidência de mortalidade por este tipo de câncer nas mulheres.
Palavras-chave: atenção primária à saúde; neoplasia intraepitelial de colo do útero; teste de papanicolau

Introduction

In January 2020, researchers began to monitor the emergence of a new virus in China that produced Severe Acute Respiratory Syndrome (SARS). Since then, national and international news, daily reports from the World Health Organization (WHO), scientific articles, and the mobilization of the Oswaldo Cruz Foundation (Fiocruz) have emerged regarding the new health emergency[1].

According to the aforementioned author, on January 22, 2020, the WHO convened the first meeting of the Emergency Committee, under the uncertainty of whether or not a Public Health Emergency of International Concern (PHEIC) would be constituted. In Brazil, the Surveillance Secretariat of the Ministry of Health (SVS/MS) had already activated response mechanisms[2,3] and on January 28 of the same year, the Ministry of Health (MS) raised the emergency alert to level 2, considering it as an imminent danger. At the same time, in Europe (Italy and France) and the United States (USA), the first cases of COVID-19, a disease caused by the Sars-CoV-2 coronavirus, began to be detected. On the 30th, PHEIC was declared and on March 11, due to the geographical spread of the virus, the WHO declared that the world was living through the first pandemic of the 21st century[1].

During health crises similar to those faced in recent times, it is preferable for the health system to develop resilient teams, with the capacity to meet emergency demands, while maintaining its essential activities[4].

Given this scenario, anxiety and concern have arisen among health services, including Primary Care (PC), which is the main gateway to the Health Care Network (HCN). Since then, the Ministry of Health (MS) has published recommendations for reorganizing the flow of care in Basic Health Units (BHU). These flows consisted of promoting the response to the pandemic through measures to prevent transmission and care for mild cases, which caused damage to the performance of essential activities inherent to this point in the network[5]. In this sense, the authors reinforce that women's health was one of the areas affected, namely by the suspension of preventive exam routines for Cervical Cancer (CC) - known as Pap smear -, nursing consultations, among others.

The term "Cancer" is used to define a large number of diseases and can be characterized by the disordered growth of a subject's own cells, which, once altered, become capable of invading tissues, then organs near or far from where they originated, and may spread to other body zones, leading to metastasis[6].

CC, also known as cervical cancer, is caused by persistent infection by oncogenic types of Human Papillomavirus - HPV, especially HPV-16 and HPV-18, which are responsible for about 70% of cervical cancers. After genital infection by these viruses, there is a possibility of cellular changes that can develop into cancer. These changes are easily diagnosed in the Pap

smear test and are curable in almost all cases, provided they are diagnosed early. That is why it is important to have the test periodically[7].

Except for non-melanoma skin cancer, in 2021 CC was classified as the third most frequent malignant tumor in the female population, behind breast and colorectal cancer, and the third cause of death of women from cancer in Brazil[8].

In the North of Brazil, according to estimates made for 2023, CC will occupy the second position in the ranking of the 10 most frequent types of cancer in Brazilian women, based on cancer incidence rates per 100,000 female inhabitants, excluding non-melanoma skin cancer[9]. Overall, cancer is a growing and relevant global public health problem, especially in underdeveloped countries.[10].

One of the preventive measures to reduce the incidence of and mortality from CC is screening for the disease through cytopathologic examination. This measure is an exemplary public health strategy since its positive impact has been proven from international experiments[11].

The interest in conducting this research arose due to the limited supply of the CC screening service in Palmas, the restriction of vacancies for care through well-organized agendas that did not cause crowding in the health center, and the low demand of the target population for this service due to the widespread fear of the moment, to understand what were the consequences of the period of greater transmissibility of COVID-19 in this area of women's health.

In view of the above, the following questions arose: what is the profile of the results of the CCP performed between 2020-2021 at Santa Fé BHU? What are the most frequent changes in these exams?

During the researcher's professional performance at the Santa Fé Basic Health Unit, it was possible to observe the gradual return of activities inherent to Primary Care after the regression of COVID-19 transmissibility, how slow the process of readaptation and adherence to the routine of performing the Pap smear by the female population and the search for their results was, in addition to the active search for women with altered test results collected in 2020, the most critical period of the pandemic.

In addition, the BHU is located in the southern region of the city, considered peripheral, with great socioeconomic vulnerability and a mostly UHS-dependent (Unified Health System) population.

The creation of a delivery flow for these results, the quality of cervical cytopathology collection, and the strategies to reach this target audience were demands raised in discussions at the Professional Practice Educational Unit in the preceptorship learning space of the Family and Community Health Residency at of the Public Health School Foundation (FESP - *Fundação Escola de Saúde Pública*) and motivated the interest in the theme for this research.

This research contributes to the reflection on the provision of resolutive care, through a situational diagnosis on this important health problem, CC, and its main objective is to provide health professionals with information on the quality of CCP exams.

Thus, the objective of this research is to describe the findings of the CCP reports performed at the Santa Fé BHU during the COVID-19 pandemic's most critical period corresponding to the years 2020 and 2021 and their main changes.

Materials and Methods

Study type

This is a cross-sectional, documentary, descriptive-exploratory, retrospective study with a quantitative approach.

The sources of documentary research are primary, that is, they are data and information that have not yet been treated scientifically or analytically[12].

Therefore, the study types listed are adequate to achieve the proposed objectives.

Research design

Data were collected through the reports of the CCP exams performed in a Basic Health Unit in the southern region of Palmas, in a 2-year interval, corresponding to the period from January 1, 2020, to December 31, 2021.

Cervical Cytopathologic Examination reports issued via the Cancer Information System (SISCAN) were the instrument for data collection.

The population consisted of 336 reports of CCP exams performed in women at the Santa Fé BHU in the aforementioned timeframe.

The following information was used in the exam reports: health unit identification aspects where the collection took place; collection date; analysis date; woman's age; home address; laboratory data and results (sample adequacy, epithelia, representativeness of the transformation zone, benign reactive or reparative cell changes, microbiology, and diagnoses), issued by the laboratory for epidemiological and clinical characterization of the sample, made available via health systems and recommended by the MH. Accessibility to SISCAN/SISCOLO (Cancer Information System/Cervix Cancer Information System) occurred through the registration of the primary care professional, creator of the larger project, entitled: QUALITY IN THE DIAGNOSIS OF CERVIX CANCER: A LOOK FOR SAFETY. Namely, the present study is part of this project. The larger research project was registered in Plataforma Brasil, submitted to the Research Ethics Committee (REC) of the Federal University of Tocantins (UFT), and obtained a favorable opinion on 07/13/2020 under protocol number 32228920.0.0000.5519. All research was carried out in accordance with CNS Resolution No. 466/12, which regulates research involving human beings[13]. There was no need for a Free and Informed Consent Term (FICT).

Inclusion and Exclusion Criteria

Sixty-nine reports from women who did not belong to the Santa Fé BHU's area of scope were excluded.

Procedures

The researcher carried out a critical and reflective reading of the reports, then followed with the data layout in an Excel spreadsheet, for better visualization and comparison of the results.

Subsequently, the data referring to the reports were attached to the statistical program Statistical Package for the Social Science (SPSS) version 20.0 and were therefore analyzed. Initially, the results were expressed as absolute and relative frequency (percentages), means, and standard deviation. After surveying the matrix, tables, and graphs were prepared in order to favor the understanding of the findings.

Results

After applying the method described, the following information was obtained. Between 2020 and 2021, 267 cervical cytopathological examinations were performed at the Santa Fé BHU on women belonging to the unit's area of scope.

According to the distribution of women who underwent the CCP examination, 25 (9.4%) women were between 18 and 24 years old, 15 (5.6%) were 60 years old or older (up to 86 years old), and the majority were represented by 227 (85%) women who were between 25

and 64 years old according to the age that appeared on the reports. The minimum age presented was 18 years and the maximum was 86 years.

According to the Individual Registration Report of the Santa Fé Basic Health Unit, as of 12/31/2021, there were a total of 5,230 women registered in the area, 3,890 aged between 18 and 86 years, and 2,895 women aged between 25 and 64 years, with active registrations.

From this perspective, when dividing the number of women who underwent the exam within this age group at the Santa Fé Basic Health Unit (n = 267), in 2020 and 2021, by the number of women aged between 18 and 86 years attached to this same place and years respectively (n = 3,890), a rate of 6.86% exams performed is obtained.

Regarding the time interval between sample collection and its arrival at the laboratory, 188 (70.4%) samples were sent within 12 days. In addition, 200 (74.9%) reports were released within 30 days, after the collection of the CCP according to data shown in Table 1.

Table 1. Distribution (%) of cervical cytopathology test reports according to the flow time interval between test collection and test report release. Palmas, 2022. (n=267)

Time between collection and arrival of the sample at the laboratory	n	%		
Time interval (mean ± standard deviation)	11.82 ± 25.421		Minimum 0	Maximum 373
Up to 12 days	188	70.4		
13 days or more	79	29.6		
19 days or more	37	13.9		
Time between collection and test report release	**n**	**%**		
Time interval (mean ± standard deviation)	29.51 ± 30.477		Mínima 6	Máxima 385
Up to 30 days	200	74.9		
31 days or more	67	25.1		

Source: Authors.

Regarding the sample pre-analytical analysis, only 1 (0.4%) sample was rejected, due to duplicate registration, as shown in Table 2.

Table 2. Distribution (%) of cervical cytopathology test reports according to data regarding pre-analytical analysis and factors influencing the sample quality of the test reports. Palmas, 2022. (n=267)

Characteristics	n	%
Pre-analytical analysis		
Rejected	1	0.4
Not rejected	266	99.6
Sample suitability		

Unsatisfactory	15	5.6
Satisfactory	251	94.0
Epithelia represented in the sample		
Squamous	251	94.0
Glandular	164	61.4
Metaplastic	140	52.4
Representativeness of the Squamocolumnar Junction (SCJ)		
No	86	32.2
Yes	166	62.2

Source: Authors.

In Table 2, the data regarding the sample suitability were distributed as follows: 251 (94%) were satisfactory and 15 (5.6%) were unsatisfactory for oncotic Pap smear weighting.

Among the unsatisfactory samples, the majority occurred in 2020.

According to Table 3, no unsatisfactory samples were identified in this survey due to hypocellular or acellular material in less than 10% of the smear, but unsatisfactory samples were identified first due to the presence of desiccation artifacts in 11(4. 1%) samples, 1%) samples, pyoceles in 4(1.5%), blood in 3(1.1%), external contaminants in 1(0.4%) sample and intense cell overlapping 1(0.4%) sample in more than 75% of the smear, namely the minority of samples showed more than two features concomitantly.

Table 3. Distribution (%) of cervical cytopathological examination reports according to data on benign cervical changes present in the samples. Palmas, 2022. (n=267)

Characteristics	n	%
Benign cervical changes*	250	93.6
Inflammation	220	82.4
Immature squamous metaplasia	30	11.2
Repair	12	4.5
Atrophy with inflammation	30	11.2

Source: Authors.
*The percentage was higher than 100% as the same woman could present two or more subcategories.

Squamous cells were present in 94.0% of the samples, followed by the presence of glandular cells in 61.4% of the samples and metaplastic cells in 52.4% (Table 2).

Benign cervical alterations are considered to be changes in epithelial cells, which can be identified as atrophy, inflammation, metaplasia, radiation, and repair. Generally, these changes are determined by the action of physical agents, which can be mechanical, radioactive

or thermal, and chemical, such as abrasive or caustic drugs, chemotherapy, and vaginal acidity on the glandular epithelium[14].

In Table 3 it was possible to notice that inflammation was the most benign cervical alteration present in the researched sample, being represented in 220 (82.4%) reports, followed by immature squamous metaplasia and atrophy with inflammation in 30 (11.2%) exams each and repair in 12 (4.5%) of the analyzed reports.

Table 6 shows the main microorganisms present in this study's cytopathological examinations, namely Lactobacillus sp. (56.2%) in the first place, followed by cocci (29.2%), supracytoplasmic/suggestive bacilli of Gardnerella vaginalis (13.9%), Candida sp. (6%).

Supra-cytoplasmic bacilli suggestive of Gardnerella/Mobiluncus, fungus Candida sp., and protozoan Trichomonas vaginalis may have been responsible for the inflammations found during this survey.

The Brazilian Classification of Cervical Cytopathology Reports (BCCCR) of 2012 establishes the cytopathological changes classified as: Atypical Squamous Cells (ASC), squamous cells of undetermined significance possibly non-neoplastic (ASC-US), atypical squamous cells of undetermined significance that high-grade lesion cannot be ruled out (ASC-H), low-grade squamous intraepithelial lesion (LSIL), high-grade squamous intraepithelial lesion (HSIL), high-grade squamous intraepithelial lesion that cannot exclude micro invasion (HSIL-MICRO), invasive squamous cell carcinoma and invasive adenocarcinoma[15].

Analyzing the requests for altered cytopathological tests in women between 2020 and 2021 according to Table 5, it was possible to observe changes in 10.9% (29) of the reports. When using n=29, there was a prevalence of ASC-H (34.5%), followed by HSIL (27.6%), ASC-US (24%), LSIL (6.9%), AGC (3.5%) and HSIL-MICRO (3.5%) of the total of altered exams.

Table 5. Distribution (%) of cervical cytopathological examination reports according to changes related to cell atypia found in the samples of the examination reports. Palmas, 2022. (n=267)

Characteristics	n	%
Presence of change in the report		
No	223	83,5
Yes	29	10.9
Atypical cells of undetermined significance (n=29)**		
Squamous - possibly non-neoplastic (ASC-US)	7	24.0
Squamous - does not rule out high-grade lesion (ASC-H)	10	34.5
Glandular - possibly non-neoplastic (AGC)	1	3.5
Squamous cell atypia (n=29)**		
Low-level intraepithelial lesion (LSIL)	2	6.9
High-level intraepithelial lesion (HSIL)	8	27.6
High-level intraepithelial lesion, cannot exclude micro invasion (HSIL-MICRO)	1	3.5

Source: Authors.

** Only data from amended reports were considered for relative frequency calculation.

It was also possible to infer that out of the 29 alterations referring to cellular atypia found in the samples of the examination reports, 10 (34.5%) of these were within the age range between 35 and 44 years and 19 (65.5%) women were older than 35 years.

Discussion

After analyzing the data obtained, it was found that out of the 267 CCP exams performed, 227 (85%) were on women who were within its target age group - 25 to 64 years old, according to the Brazilian Guidelines for Cervical Cancer Screening[14]. In addition, 175 (65.5%) tests were performed in women over 35 years of age, an age range in which the frequency of CC is higher[16].

Among the exams performed, 40 (15%) were performed on women out of the age group recommended for the target audience. This data does not match the data made available in 2016 by INCA (National Cancer Institute), which states that around 20% to 25% of screening tests in Brazil have been performed beyond the recommended age range[14].

When analyzing the total number of women belonging to the scope of this unit and who are within the target age group for CC screening (n=2,985) and dividing by the total number of tests performed on women within this age group (n= 227), a cytopathological coverage rate of 7.6% of the target population is obtained. This number, therefore, represents a low coverage rate among users in the Santa Fé area, since the coverage of the target population must be at least 80% in order to reduce the incidence of CC[17].

According to the recommendation made in the Quality Management Manual for Cytopathology Laboratory, the smears that used the method using cover fixative (spray or aerosol) should arrive at the Cytopathology Laboratory within a maximum of 15 days[18], in this study the majority (70.4%) were sent within 12 days, up to 3 days in advance of the recommended time limit.

According to the previously mentioned manual, it is recommended that the result of the cytopathologic examination be released by the laboratory within a maximum of 30 days. However, after ratification by the Ordinance of the National Qualification in Cytopathology in the prevention of cervical cancer (QualiCito), laboratories were given autonomy to stipulate and change their goals, according to their possibilities, in order to achieve the standard[18]. The laboratory should review its work process in detail, including non-diagnostic components, and estimate the times consumed in the routine to identify opportunities for improvement[19]. Even in the face of the flexibility justified in the aforementioned Manual, 74.9% of the reports in this study were released within the recommended timeframe of 30 days.

In a study carried out in Santa Catarina in 2017, with the aim of evaluating the impact of training UHS professionals involved in the collection of cervicovaginal samples, it was possible to verify that unsatisfactory samples showed a significant difference after training, from 2.18% to 1.0% ($p<0.0001$)[20].

A study conducted during the pandemic period (from March 2020 to February 2021), in a municipality in western Paraná, Brazil, where a total of 11,315 tests were performed and processed, revealed a sample of 11,149 (98.53%) satisfactory and 109 (0.96%) unsatisfactory for oncotic analysis, and 721 (6.37%) tests with cytological changes[21]. This research was also within the parameter recommended by the MH, up to 5% for unsatisfactory samples[22].

According to INCA (2006), in 2005, only six Brazilian states and the Federal District had rates of unsatisfactory tests lower than 5%, which is the minimum quality standard established by the Pan American Health Organization[23,24].

Namely, SCJ was represented in 62.2% of the total number of exams performed. Thus, this study showed that the quality of the sample was proportionally better than that of a study carried out in the municipality of Ponta Grossa, where 11,732 exams were performed in 2014 and 17,620 in 2015, of which 5,484 (47%) presented endocervical cells in 2014 and 8,882 (50%) in 2015[25]. Among the epithelia represented in the cytopathological sample of the population studied from 2015 to 2020 in São Luís-MA, the sum of glandular and metaplastic epithelia (71%) was lower than desired, which may be an indication of the poor quality of the collection and/or material fixation[26].

The presence of metaplastic cells or endocervical (glandular) cells has been taken into account regarding the indicator of collection quality, due to the fact that this collection aims to capture representative elements of the place where almost all cervical cancers are located, that is, the Squamocolumnar Junction (SCJ) [27].

The data presented in Table 3 are similar to those found in a retrospective study that described the results of cytopathological examinations of the uterine cervix in women aged 25 to 64 years in the municipality of João Pessoa from 2009 to 2013, which also reported that benign cervical lesions were found, where it highlighted the inflammation as the most recurrent in all the years surveyed[28]. The results of benign cell changes in this study were also similar to those of other studies conducted in Aracajú[29] and Teresina[30], in which inflammation was more frequent, with ratios of 84% and 85.5%, respectively.

What drew attention was the occurrence of Leptothrix in 1 (0.4%) verified sample, since its appearance is uncommon in this research and in another one carried out in a BHU in Passos-MG, in 2016, with also only 1 sample containing the bacillus[31].

In a cross-sectional survey carried out from cervical cytopathological exams collected at an FHU in Maceió - AL, between 2016 and 2019, conventional samples from 984 women were observed. As for the microbiology found, the most frequent agents in the studied samples were: lactobacilli (40.8%), cocci (39.7%), and other bacilli (32.9%)[32], the first two microorganisms appearing in the same order in this study and going against the study carried out in a Basic Health Unit in Ceará, which presented cocci as the highest occurrence (49.2%), in addition to infectious agents, such as Gardnerella vaginalis (65%), Candida sp. (23.7%), and Trichomonas vaginalis (5.6%)[33].

Lactobacillus are the most common microorganisms in the normal vaginal microbiota, comprising about 20 different species, important in maintaining the balance of the vaginal environment[34,35]. The presence of Lactobacillus has been considered a protective element against other microorganisms that may cause pathogenicity by producing lactic acid that maintains the vaginal pH more acidic, inhibiting various genital infections[36,37].

As for the results regarding cellular atypia described in Table 5, these differ from the study carried out by Rigon during the most critical period of the COVID-19 pandemic, with the following data: out of 721 test results that presented some cytological alteration, 234 (32.45%) were ASC-US, 56 (7.77%) ASCH, 307 (42.58%) LSIL, 114 (15.81%) HSIL, 6 (0.83%) HSIL-MICRO, 3 (0.42%) invasive squamous cell carcinoma and 1 (0.14%) were invasive cervical adenocarcinoma[21]. This last research showed similar results to that carried out by Ceolin, where it was evidenced that ASC-US was the most prevalent with 27 (1.7%), followed by HSIL 9 (0.5%), LSIL 4 (0.2%), ASC-H 4 (0.2%) and invasive squamous cell carcinoma 1 (0.06%) when evaluating a population from 2015 to 2016 in a municipality in southern Brazil[38].

According to INCA (2016), ASC-US represents the most common alteration presented in cytopathological reports of the cervix, ranging from 3.5% to 5% of the total number of tests performed, which also does not match this research data[14].

In a survey carried out in Brazil by INCA in 2021[17], the total number of squamous cell atypia, classified as ASC-US and ASC-H among altered cytopathological exams, showed a

slight increase in alteration percentages from 58.6% to 59.7% for 2019 and 2020, respectively, a circumstance that may explain the prevalence of ASC-US in this study's analysis.

A more current reference states that CC is more frequently diagnosed in women between 35 and 44 years old, with an average age of diagnosis of 50 years[39].

These data were different from those of a study carried out in the State of Tocantins, in 2018, where 50,352 cytopathological examinations of the cervix were analyzed, and during the cervical inspection, 42,230 patients had a normal appearance (83.87%), while 5,726 had some alteration (11.37%). Among the patients with alterations, women between 30 and 34 years of age were the most represented (n = 919) and belonged to the age group between 30 and 34 years (16.05%), being the group with the highest prevalence[40], an also divergent data from this study.

In a research carried out through the analysis of medical records and cytopathological examinations of the uterine cervix performed in a BHU in the city of Cascavel, PR, over a period of one and a half years - January 2020 to July 2021, 446 examinations were recorded. Exams performed on patients aged 25 to 64 years totaled 384 (86.04) of the sample. Among the altered exams, 37.5% corresponded to ASC-US, 25% were related to LSIL, 28.13% corresponded to HSIL, and 6% ASC-H [41].

Conclusion

Based on the analyzed data, this study shows that during 2020, with the advent of the COVID-19 pandemic, there was a low number of tests performed, since elective care, such as cancer screening, was interrupted or reduced in most countries, as well as Brazil.

It should be noted that the health professionals responsible for collecting the sample in the examination need to be constantly improving their professional practice, which is an investment that requires few resources and has low cost, since a significant number of the samples collected were classified as unsatisfactory, in addition to the SCJ low representativeness. In this research, some data were beyond the parameters adopted by the responsible organizations for such data, such as INCA and the MH.

This paper reaffirms this issue's relevance to women's health and to public health in general. In addition, the situational diagnosis shows that the coverage of CCP needs to be improved to ensure adequate diagnosis for women and achieve better health indicators, thus reducing the mortality rate due to this type of cancer.

Moreover, the professional nurse needs to combine knowledge with practice and offer humanized care to women, with hospitality and information - through health education actions - being the main approach strategies, in order to obtain complete adherence to the CCP. Informing is also to make women aware of their role as responsible subjects for their health and well-being.

Furthermore, additional studies are essential to improve scientific knowledge on this subject and to assess which strategies can be adopted for this population.

Bibliographical References

1.Matta G, Rego S, Souto E. Os efeitos sociais da Covid-19 no Brasil: recebíamos vulnerabilizadas e respostas à pandemia. 2021.
2.Croda JHR, Garcia LP, Croda JHR, Garcia LP. Resposta imediata da Vigilância em Saúde à epidemia da COVID-19. Epidemiologia e Serviços de Saúde [Internet]. 2020 [cited 2023 Jan 10];29(1).
3. Henriques CMP, Vasconcelos W, Henriques CMP, Vasconcelos W. Crises dentro da crise: respostas, incertezas e desencontros no combate à pandemia da Covid-19 no Brasil. Estudos Avançados [Internet]. 2020 Aug 1 [cited 2023 Jan 10];34(99):25–44.

4. Sochas L, Channon AA, Nam S. Counting indirect crisisrelated deaths in the context of a low-resilience health system: the case of maternal and neonatal health during the Ebola epidemic in Sierra Leone. Health Policy and Planning [Internet]. 2017 Nov 1;32(suppl_3):iii32–9.
5. Silva BLA de O, Barros RA de A, Lopes IMRS. O impacto da pandemia da COVID-19 no rastreamento do câncer de colo uterino em Teresina – PI. Research, Society and Development. 2021 Aug 8;10(10):e2091010118768.
6. Organização Mundial da Saúde. Diretrizes da OMS contra riscos potenciais na proteção de trabalhadores de nanomateriais manufaturados [Internet]. OMS; 2017.
7. Instituto Nacional do Câncer José Alencar Gomes da Silva. Câncer do colo do útero [Internet]. Instituto Nacional de Câncer - INCA. 2022 [citado em 10 de janeiro de 2023].
8. Instituto Nacional De Câncer José Gomes Da Silva. Ambiente, trabalho e câncer: aspectos epidemiológicos, toxicológicos e regulatórios [Internet]. 2021 [citado em 10 de janeiro de 2023].
9. Brasil. Ministério da Sáude. Região Norte – estimativa dos casos novos [Internet]. Instituto Nacional de Câncer - INCA. 2022 [citado em 10 de janeiro de 2023].
10. Vineis P, Wild CP. Padrões globais de câncer: causas eprevenção. The Lancet [Internet]. fevereiro de 2014 [citado em 10 de janeiro de 2023];383(9916):549–57.
11. Ribeiro CM, Dias MBK, Pla MAS, Correa FM, Russomano FB, Tomazelli JG. Parâmetros para a programação de procedimentos da linha de cuidado do câncer do colo do útero no Brasil. Cadernos de Saúde Pública. 2019;35(6).
12. Universidade Federal de Minas Gerais. O que é pesquisa documental? – Biblioteca Prof. Lydio Machado Bandeira de Mello – Faculdade de Direito da UFMG [Internet]. 2021 [citado em 10 de janeiro de 2023].
13. Instituto Nacional de Câncer José Alencar Gomes da Silva. RESOLUÇÃO N o 466, DE 12 DE DEZEMBRO DE 2012 [Internet]. 2012.
14. Ministério da Saúde. INCA. Diretrizes Brasileiras para o Rastreamento do Câncer do Colo do Útero [Internet]. Rio de Janeiro; 2016.
15. Ministério da, Saúde. Nomenclatura Brasileira para Laudos Citopatológicos Cervicais [Internet]. Instituto Nacional de Câncer José Alencar Gomes da Silva. 2012.
16. Iram S, Musonda P, Ewies AAA. Premenopausal bleeding: When should the endometrium be investigated?--A retrospective non-comparative study of 3006 women. European Journal of Obstetrics, Gynecology, and Reproductive Biology [Internet]. 2010 Jan 1 [cited 2023 Feb 6];148(1):86–9.
17. Instituto Nacional de Câncer José Alencar Gomes da Silva (INCA). Detecção Precoce do Câncer [Internet]. Ministério da Saúde; 2021 [citado em 4 de fevereiro de 2023].
18. Ministério da Saúde. Manual de Gestão da Qualidade para Laboratório de Citopatologia [Internet]. 2nd ed. Rio de Janeiro: Instituto Nacional de Câncer José Alencar Gomes da Silva (INCA); 2016 [cited 2023 Feb 4].
19. Persoon TJ, Zaleski MS, Cohen MB. Improving Pap Test Turnaround Time Using External Benchmark Data and Engineering Process Improvement Tools. American Journal of Clinical Pathology. 2002 Oct;118(4):527–33.
20. Jakobczynski J, Frighetto M, Perazzoli M, Dambrós BP, Dallazem B, Kirschnick A. Training of health professionals and its impact on the trace of precursoring injuries of the uterine column cancer. Revista Brasileira de Análises Clínicas [Internet]. 2018 [cited 2023 Feb 5];50(1).
21. Rigon FP, Plewka J, Turkiewicz M, Santos MA dos.Dados do programa do câncer do colo do útero na pandemia Covid-19. Arq ciências saúde UNIPAR [Internet]. 2022 [cited 2023 Feb 5];26(3):794–808.

22. Fundação Oswaldo Cruz. Rastreamento do câncer do colo do útero: adequabilidade da amostra [Internet]. portaldeboaspraticas. 2018 [cited 2023 Feb 4].
23. Instituto Nacional de Câncer. A situação do câncer no Brasil [Internet]. Coordenação de Prevenção e Vigilância; 2006.
24. Thuler LCS. Mortalidade por câncer do colo do útero no Brasil. Revista Brasileira de Ginecologia e Obstetrícia. 2008 May;30(5).
25. Machado EP, Wosniack C, Reche PM, Costa BR da, Bach dos Santos KM, Perek KV, et al. Projeto Extensionista: uma Abordagem Interdisciplinar junto à Enfermagem na Prevenção do Câncer do Colo Uterino. Extensão em Foco. 2018 May 15;(16).
26. Pereira Filho JL, Azevedo GCA, Theodoro TF, Bonfim BF, Monteiro P de M, Arouche R, et al. Câncer do colo do útero: Análise epidemiológica e citopatológica no Município de São Luís, Estado do Maranhão, Brasil. Research, Society and Development. 2021 Jul 13;10(8):1–11.
27. Fundação Oswaldo Cruz. Rastreamento do câncer do colo do útero: adequabilidade da amostra [Internet]. portaldeboaspraticas. 2018 [cited 2023 Feb 4].
28. Jeronimo C, Moraes M. Análise dos resultados de exames citopatológicos do colo uterino. Revista de Enfermagem UFPE on line [Internet]. 2015 Mar 19; [Citado em 2023 Fev 5]; 9(3): 7510-7515.
29. Reis NROG, Costa AMC, Madi RR, Melo CM de. Perfil citológico e microbiológico de material cérvicovaginal coletado em consultório de enfermagem, 2009- 2011. Scientia Plena [Internet]. 2013 Jul 19 [cited 2023 Feb 6];9(5).
30. Sousa AC de O, Passos FFF de B, Costa GS de S, Oliveira FPP de, Rodrigues TSS. Análise das alterações citopatológicas registradas no sistema de informação do câncer de colo do útero em Teresina. Revista Interdisciplinar [Internet]. 2017 [cited 2023 Feb 6];10(4):21–30.
31. Silva EERP. Prevenção de Doenças sexualmente transmissíveis em mulheres atendidas na Unidade Básica de Saúde Penha II em Passos-MG. [Internet]. [Universidade Federal de Minas Gerais]; 2017 [cited 2023 Feb 4]. p. 1–26.
32. Barros LM de, Jucá LGP, Dias MRF de M, Junior CA. Prevalência dos achados citopatológicos de colo uterino em uma unidade de saúde da família do município de Maceió-AL. Brazilian Journal of Development. 2021;7(3):24267–79.
33. Lombelo-Campos AA, Neves FS, Duque K de CD, Leite ICG, Guerra MR, Teixeira MTB. Fatores associados ao risco de alterações no exame citopatológico do colo do útero. Revista de Enfermagem do Centro-Oeste Mineiro [Internet]. 2018 Mar 20 [cited 2023 Jan 4];8(2330).
34. Bertuccini L, Russo R, Iosi F, Superti F. Effects of Lactobacillus rhamnosus and lactobacillus acidophilus on bacterial vaginal pathogens. International Journal of Immunopathology and Pharmacology [Internet]. 2017 Jun 1 [cited 2023 Feb 4];30(2):163–7.
35. Araújo SR. Citologia Cérvico-Vaginal Passo a Passo [Internet]. 2010 [cited 2023 Feb 5].
36. Ma B, Forney LJ, Ravel J. Vaginal Microbiome: Rethinking Health and Disease. Annual Review of Microbiology [Internet]. 2012 Oct 13;66(1):371–89.
37. Ricci P, Contreras L, Condes L. Casos clínicos vaginoses citolítica: um diagnóstico diferencial poco frecuente de vulvovaginites micótica a repetición. Revista Chilena de Obstetrícia Ginecologia [Internet].
38. Ceolin R, Nasi C, Coelho DF, Paz AA, Lacchini AJB. Análise do rastreamento do câncer do colo do útero de um município do sul do Brasil. Revista de Pesquisa Cuidado é Fundamental Online [Internet]. 2020;12:406–12.
39. American Cancer Society. Principais estatísticas para câncer cervical 2023. Cancer.org. 2023.

40. Ribeiro DW de AR, Matos RL, Coutinho AO, Damasceno DC, Oliveira RNC de, Botelho VA, et al. Perfil dos Exames citopatológicos do Colo do Útero realizados pelo Sistema Único de Saúde no Estado do Tocantins, Brasil, no ano de 2018. Revista de Patologia do Tocantins. 2019;13–6.
41. Andreetta A, Rymsa T, Tosetto C, Lessa MT da C. Alterações em exames citopatológicos realizados em Unidade Básica de Saúde: um estudo analítico transversal. Femina [Internet]. 2022 [cited 2023 Feb 4];50(8):492–7.

Table 4. Distribution (%) of cervical cytopathology test reports according to data on the microbiology of the test report samples. Palmas, 2022. (n=267)

Características	n	%
Microbiology*		
Lactobacillus sp.	150	56.2
Cocci	78	29.2
Other bacilli	14	5.2
Candida sp.	16	6.0
Supracytoplasmic bacilli/ Gardnerella Vaginalis	37	13.9
Trichomonas	1	0.4
Leptothrix	1	0.4

Source: Authors.
* The percentage was higher than 100% as the same woman could present two or more subcategories.

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