





Screening for cervical cancer during prenatal care

Rastreamento do câncer de colo do útero durante o acompanhamento pré-natal

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ABSTRACT

Objective: To evaluate cervical cancer screening in women during prenatal care. **Method:** Integrative literature review carried out in March 2020, on the LILACS, Web of Science, Scopus and MEDLINE databases. Health Sciences Descriptors, their respective synonyms, and the corresponding Medical Subject Headings were used for study selection. **Results:** The findings strengthen the current recommendations regarding the convenience of carrying out cytopathological examination, even during prenatal care, since pregnancy does not prevent the occurrence and development of cervical neoplasia. **Conclusion:** There are gaps in the screening of pregnant women. The articles included in this study made it possible to emphasize the importance of screening for cervical cancer in pregnant women and provide practitioners with grounds for the performance of the practice during this period.

Descriptors: Uterine Cervical Neoplasms; Mass Screening; Prenatal Care; Nursing; Pregnant Women.

RESUMO

Objetivo: Avaliar o rastreamento do câncer do colo do útero em mulheres no período de acompanhamento pré-natal. **Método:** Revisão integrativa de literatura realizada em março de 2020, nas bases de dados LILACS, Web of Science, Scopus e MEDLINE. Para a seleção dos estudos foram utilizados os Descritores em Ciências da Saúde, seus respectivos sinônimos e os Medical Subject Headings correspondentes. **Resultados:** Os achados fortalecem as atuais recomendações sobre a realização do exame citopatológico (CP), inclusive durante o acompanhamento pré-natal, visto que a situação gravídica não impede a ocorrência e desenvolvimento de neoplasias cervicais. **Conclusão:** Existem lacunas no rastreio em gestantes. Os artigos incluídos neste estudo permitiram alavancar a importância do rastreio de câncer cervical em gestantes e subsidiar a atuação de profissionais à realização da prática nesse período.

Descritores: Neoplasias do Colo do Útero; Programas de Rastreamento; Cuidado Pré-natal; Enfermagem; Gestantes.

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INTRODUCTION

Cervical cancer is among the main causes of death due to neoplasia in women between 30 and 69 years old⁽¹⁾ and is a relevant public health problem, especially given that it is a neoplasia with a high potential for prevention⁽²⁾. National data show an estimated incidence of more than 16,000 cases in 2020 and a lethality rate of 6.1%, for the year 2018⁽³⁾.

Relevant indexes are directly related to late diagnosis, which has been justified by the difficulty in accessing preventive services; the organizational barrier regarding scheduling, performance and delivery of the result; absence of a link between the professional and the user; and difficulty in carrying out preventive actions that meet the demand^(4,5) of women.

Considering that the most successful way of reducing cancer morbimortality rates is related to preventive attitudes⁽⁵⁾, health education practices and guidance regarding risk and protection factors that encompass neoplasia development stand out, as does the responsibility for the development and effectiveness of cervical cancer screening.

The incidence of cervical neoplasia is determined by two factors, namely, women's exposure to risk factors and the success of screening programs⁽²⁾. Screening actions take place mainly through the performance of the cytopathological examination (CP). Countries with CP coverage greater than 70%, collected over a three to five year period, have less than two deaths per 100,000 women per year, demonstrating the effectiveness of the screening program⁽⁶⁾.

In order to achieve superior coverage, timely screening should be strongly encouraged. A situation that corroborates this perspective is prenatal care, since pregnant women are at the same risk as other women of presenting cervical cancer or precursor lesions⁽⁶⁾, besides the fact that the CP can be requested during the first prenatal consultation, as per routine⁽⁷⁾.

Thus, aiming to synthesize information on the possibility of neoplasia during the pregnancy cycle and to support future actions that may improve this scenario, the present study aimed to evaluate screening for cervical cancer in women during the prenatal follow-up period.

METHOD

In order to achieve the objective proposed by this study, the integrative literature review method was used, which covers six stages: elaboration of the guiding question; search or sampling in the literature; data collection; critical analysis of the included studies; discussion of the results; and, presentation of the review⁽⁸⁾.

Following these steps, the guiding question of this integrative review was configured as follows: "What has been published on cervical cancer screening during prenatal care?" Seeking to answer this question, Health Sciences Descriptors (DeCS) and their respective synonyms were used to search for publications along with the corresponding Medical Subject Headings (MeSH): "Prenatal Care or *Cuidado Pré-Natal* OR *Assistência Pré-Natal* OR *Pré-Natal* AND Teste de Papanicolaou or Papanicolaou Test OR Papanicolau OR *Exame Colpocitológico*". The use of the Boolean operators "[AND]" and "[OR]" enabled performance of the advanced search.

Data collection was carried out in March 2020, through searches on four electronic databases, namely: Latin American and Caribbean Health Sciences Literature (Literatura Latino-Americana e do Caribe em Ciências da Saúde) (LILACS), Web of Science, Scopus, and Medical Literature Analysis and Retrieval System Online (MEDLINE).

Inclusion criteria were: original research articles, regardless of the language in which they were published, which were available online in full and free of charge. The following were excluded: repeated publications, editorials, summaries of annals, dissertations, theses, end-of-course papers, reflective studies and experience reports.

For data organization, extraction and analysis, an instrument was constructed containing information such as author and year, title of the article, study design, population and synthesis (Chart 1). In order to increase the scope of the studies and the synthesis of the results of this review, no temporal cut was applied to the searches.

Critical analysis of the included studies followed the proposed six-level hierarchy: evidence arising from the meta-analysis of multiple randomized controlled clinical trials;

Chart 1. Categorization of selected studies. Chapecó, SC, Brazil, 2020.

Author and year	Title	Outline	Population	Summary
Terlan and Cesar, 2018 ⁽⁹⁾	<i>Não realização de citopatológico de colo uterino entre gestantes no extremo sul do Brasil: prevalência e fatores associados</i>	Cross-sectional	1,474 pregnant women who had at least one prenatal consultation	<ul style="list-style-type: none"> - Prevalence of non-performance of the cervical CP in 21.6%; - Education between 0–4 years of study; - Referring to a previous abortion or miscarriage and drinking alcohol during pregnancy, and - Less than 6 prenatal consultations were risk factors for not undergoing the CP.

Continue...

Chart 1. Continuation.

Author and year	Title	Outline	Population	Summary
Ribeiro et al., 2016 ⁽¹⁰⁾	<i>Rastreamento oportunístico versus perdas de oportunidade: não realização do exame de Papanicolaou entre mulheres que frequentaram o pré-natal</i>	Cross-sectional	308 mothers of children under two years of age	<ul style="list-style-type: none"> - 21.4% had never undergone the CP; - Education remained associated with the outcome, indicating that women with more years of study are more likely to undergo the exam.
Ribeiro et al., 2013 ⁽¹¹⁾	<i>Não adesão às diretrizes para rastreamento do câncer do colo do útero entre mulheres que frequentaram o pré-natal</i>	Cross-sectional	308 women with children under two years of age	<ul style="list-style-type: none"> - The percentage of women with an expired CP was 26.6%, including those who had never undergone the exam; - All of the women with an expired CP were attended to in prenatal care; - Among the women, 75.4% started prenatal care in the first trimester and 63.5% attended 7 to 10 prenatal consultations.
Castrucci et al., 2008 ⁽¹²⁾	Cervical Cancer Screening Among Women Who Gave Birth in the US-Mexico Border Region, 2005: The Brownsville-Matamoros Sister City Project for Women's Health	Cross-sectional	488 postpartum women residing in Mexico and 453 in Texas	<ul style="list-style-type: none"> - 12.7% of the women from Mexico underwent the CP during prenatal care, compared to almost 73.8% of the women from Texas; - Women with higher levels of education (≥ 12 years) were more likely to undergo the CP; - In Texas, women who received prenatal care were more likely to have a CP compared to women who did not receive any prenatal care.
Nygård et al., 2007 ⁽¹³⁾	Effect of an antepartum Pap smear on the coverage of a cervical cancer screening programme: a population-based prospective study	Cohort	2,175,762 women residing in Norway divided into 3 groups	<ul style="list-style-type: none"> - 69% of the pregnant women underwent the CP during one year of follow-up from the beginning of pregnancy; - In comparison to non-pregnant women, pregnant women were 4.3 times more likely to be tested during follow-up.
Manfredi et al., 2016 ⁽¹⁴⁾	<i>Exame Papanicolaou em gestantes: conhecimento dos enfermeiros atuantes em unidades de atenção primária à saúde</i>	Cross-sectional	27 nurses	<ul style="list-style-type: none"> - 62.97% of nurses did not collect the gynecological exam in pregnant women; - Of the nurses who perform it, 74% do the collection incorrectly; - With regard to participation in training in prenatal care and gynecological examination, 88.8% said they had previously participated.
Sekine et al., 2018 ⁽¹⁵⁾	Malignancy during pregnancy in Japan: An exceptional opportunity for early diagnosis	Cross-sectional	277 questionnaires completed by secondary and tertiary hospital institutions providing care to pregnant women	<ul style="list-style-type: none"> - Cervical cancer was present in 71.4%; - Gynecological neoplasia were responsible for 79.3% of neoplasias associated with pregnancy; - 92% of cervical cancers were diagnosed through a CP during pregnancy.

Continue...

Chart 1. Continuation.

Author and year	Title	Outline	Population	Summary
Bakari et al., 2017 ⁽²⁰⁾	The prevalence and course of preinvasive cervical lesions during pregnancy in a Northern Nigerian Teaching Hospital	Cross-sectional	250 pregnant women	<ul style="list-style-type: none"> - Of the abnormal results, 6% had pre-invasive cervical lesion, 87% had low-grade squamous intraepithelial lesion, while 13% had high-grade squamous intraepithelial lesion; - The risk factors associated with pre-invasive cervical lesions were beginning sexual activity <16 years, number of sexual partners, prior history of sexually transmitted infection and human immunodeficiency virus.
Khaengkhor et al., 2011 ⁽²¹⁾	Prevalence of abnormal cervical cytology by liquid based cytology in the antenatal care clinic, Thammasat University Hospital	Cross-sectional	143 pregnant women	<p>The prevalence of abnormal cervical cytology in the present investigation was 7%</p> <ul style="list-style-type: none"> - Four cases of atypia of undetermined significance in squamous cells - Possibly non-neoplastic, five cases of low-grade squamous intraepithelial lesion, and one case of high-grade squamous intraepithelial lesion; - Only 6% of participants had the correct understanding of the need for the CP; - 31% of the multiparous pregnant women had not previously undergone the CP.
Loomis et al., 2009 ⁽²²⁾	Cervical cytology in vulnerable pregnant women	Cross-sectional	192 pregnant women	<ul style="list-style-type: none"> - Abnormal CP was found in 12.5% of the participants; - 58.3% of abnormal results indicated ASCUS.
Sueblinvong et al., 2005 ⁽²³⁾	Prevalence and management of abnormal Pap smear in Antenatal Care Clinic at Thammasat University Hospital	Cross-sectional	500 pregnant women	<ul style="list-style-type: none"> - The prevalence of abnormal CP in pregnant women who attended the prenatal clinic was 0.8%; - Four patients had an abnormal CP (two cases of atypia of undetermined significance in squamous cells - possibly non-neoplastic and two cases of low-grade squamous intraepithelial lesion); - 22.5% had undergone the CP in the past.
Torsten et al., 1992 ⁽²⁴⁾	Cytologic cancer prevention with smears of the uterine cervix and endocervical canal in pregnancy	Cross-sectional	1,417 pregnant women	<ul style="list-style-type: none"> - 5.85% had abnormal CP in the prepartum period; - 14.8% of abnormal smears showed squamous dysplasia; - 2.3% had an invasive adenocarcinoma or squamous carcinoma.

evidence derived from individual studies with experimental design; evidence arising from quasi-experimental studies; evidence from descriptive or qualitative studies; evidence from experience reports or case reports; and, evidence based on expert opinion⁽⁸⁾.

The initial search carried out by crossing the descriptors on the selected databases resulted in 129 publications. After excluding duplicates, 114 went on to the next selection step. Reading the titles removed 80 studies and reading the abstracts excluded a further 17. Another five studies were rejected because they fit the exclusion criteria (four unavailable for free and a manual). Thus, 12 articles were read in full, answering the guiding question of this review and, thus, made up the final corpus of the study (Figure 1).

RESULTS

Regarding the profile of the selected publications, five (41.6%) were published in the last five years, demonstrating the permanent initiative to study the present outcome. Eight (66.6%) of the studies were in English. Almost all publications, 11 (91.6%), fall into the category of level 4 evidence, according to the research design.

As for the synthesis of the results of the analyzed publications, five (41.6%) showed abnormal CP results during the gestational period, confirming that one situation does not prevent the occurrence of the other. Education was a

factor related to carrying out the exam, demonstrated in three (25%) of the studies, reinforcing the association between years of study and greater search for health balance. Moreover, a study on the CP in pregnant women with nurse participants indicated that 62.9% of these professionals did not perform collection of such an exam. The categorization of the selected studies is described in Chart 1.

DISCUSSION

The results of this review strengthen the current recommendations on the performance of the CP, including during prenatal care, given that pregnancy does not prevent the occurrence and development of cervical neoplasia.

Screening is considered a mild health technology belonging to primary health care. Therefore, professionals working at this level of care must know the recommended technique for carrying out CP collection in pregnant women, as well as its frequency and recommended age range, which encompasses examinations every three years after two consecutive annual examinations with normal results in women aged 25 to 64 years⁽⁶⁾.

Despite the relevant rates of intraepithelial lesions shown in the analyzed publications, all of them come from international studies, suggesting the possibility that pregnant women are not being screened in national territory and/or there is no research conducted during this period of their

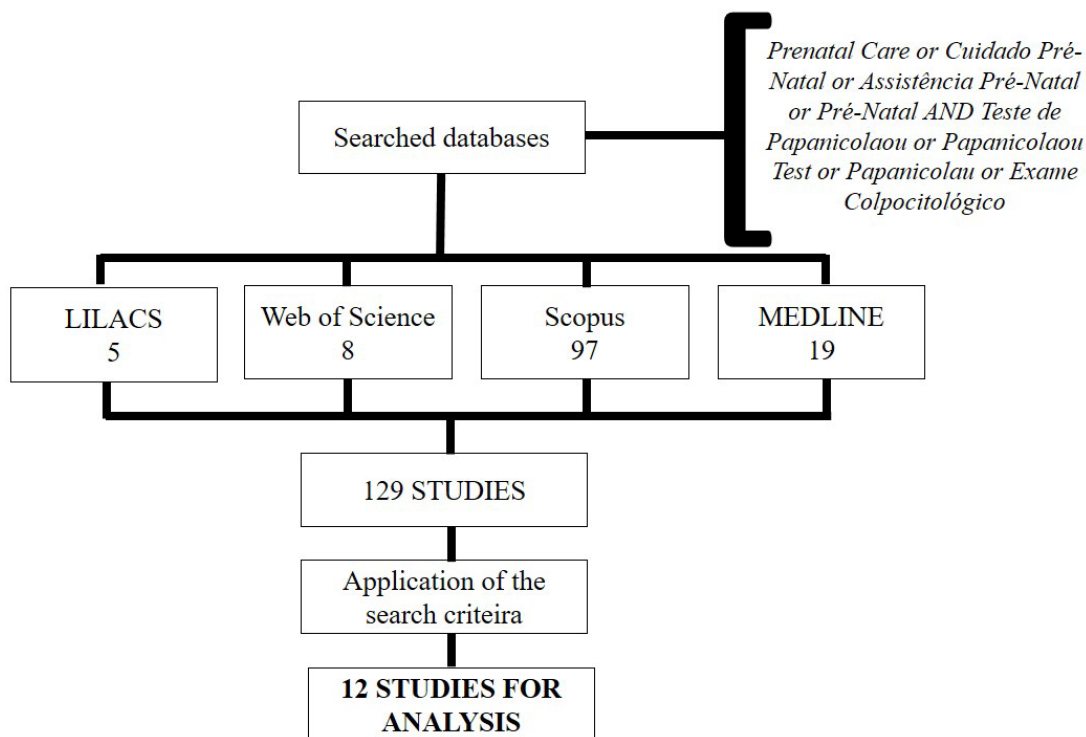


Figure 1. Search flow of studies and application of selection criteria. Chapecó, SC, Brazil, 2020.

lives. However, the National Cancer Institute (INCA) of Brazil states that the risk for the development of cervical cancer among pregnant and non-pregnant women is similar. Moreover, prenatal care is an opportune moment for such screening⁽⁶⁾, especially considering the bond formed between the prenatal professional and the woman.

However, some studies^(9,10,11,12,13) analyzed in this review demonstrated that the performance of prenatal care was not decisive in guaranteeing access to the exam, thereby wasting an opportune moment for screening.

A surprising finding was the high percentage of nurses who said they did not collect the CP in pregnant women, despite having participated in training in prenatal care and/or gynecological examination⁽¹⁴⁾. Bodies that govern the health situation at the national level corroborate that collection must be performed during the pregnancy period, if it has never been performed or is expired, considering the current recommendations^(6,7). The use of the endocervical brush during collection, although controversial, does not seem to cause risks to pregnancy, so its use is highly recommended⁽¹⁵⁾.

Training, promotion of awareness and educational activities are carried out with a view in adding value to the experiences of individuals; these activities seek to reconstruct or improve knowledge to transform reality and enhance critical sense⁽¹⁶⁾. However, it is recommended to evaluate whether the activity performed reaches the objective initially proposed, that is, if it is effective in technical and behavioral changes, which could not be observed in the previously mentioned study.

Some of the publications resulting from this review presented retrospective studies, whose subjects were women who had gone through gestational events, at most, two years prior. These studies concluded that at least 20% of women had never undergone a CP. However, they reported previous contact with health services due to prenatal care and/or the postpartum period^(9,10,11). Both situations are opportune moments for the screening of cervical cancer and its precursor lesions, especially in women who fall into the age group recommended by INCA and MS, who do not undergo CP with the recommended frequency, or who have never undergone the exam⁽¹⁰⁾.

The women's level of education was associated with CP performance, indicating that the more years of study, the greater the chances that the exam is within the recommended periodicity^(9,10,12). Failure to undergo the exam due to low levels of education has been justified by a low demand for quality care, coupled with the possibility of disinformation. Added to this is the fact that less education can lead to a lower level of information and adherence to preventive actions⁽¹⁰⁾. Other publications^(17,18) studying various outcomes, pointed out that the greater the number of years of study, the greater the chances of this population looking for better health habits and conditions.

CONCLUSION

The present review enabled the conclusion that cervical cancer screening during prenatal care does not reach totality, especially at the national level, which is deficient due to the challenges facing collection at this specific time of life. The demand is permanent and requires adaptation of the health services, as well as the professionals who work in them, so that qualified service is guaranteed and supported by the prerogatives of the Brazilian health system.

Thus, this study entails contributions to nursing, as it enables reflections on the role of nurses in prenatal care and their actions in the prevention and control of cervical cancer.

As a limitation of this review, the inclusion of studies only available online for free is pointed out. This may have deprived access to publications that indicate innovative and relevant information regarding the screening of this population.

It is suggested that future studies are carried out, which seek to understand the reasons why health professionals who carry out prenatal care do not perform the collection of the CP in pregnant women. The purpose of such understanding would be to propose strategies for this preventive action to be carried out in a qualified, safe and timely manner.

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