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Evidence for nursing assistance to pregnant with breast cancer: an integrative review

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Evidencia de asistencia de enfermería a embarazadas con cáncer de mama: una revisión integradora
Evidências para a assistência de enfermagem à gestante com câncer de mama: revisão integrativa

ABSTRACT
Objective: To discuss the evidence that the literature presents on the care of pregnant women with diagnosis of breast cancer and the contributions of the Nurse to the health of this group. Method: Integrative review of literature carried out at the bases: Latin American and Caribbean Literature on Health Sciences (LILACS), International Health Sciences Literature (MEDLINE) and Scientific Electronic Library Online (SciELO). Results: Fifteen articles composed the review. Three categories of discussion were created: 1) Breast cancer: sociodemographic characterization of pregnant women with breast neoplasia; 2) Main diagnostic and therapeutic approaches to breast cancer in pregnant women; 3) Nursing assistance to women with diagnosis of breast cancer in pregnancy. Conclusion: The nurse should be trained to identify the non-physiological changes in the breasts, contributing to early detection of cancer during prenatal consultations. Despite this, few studies have been found that address Nursing Care in this context.
DESCRIPTORS: Breast cancer; Pregnant Women; Delivery of Health Care; Medical Oncology; Nursing.

RESUMEN
Objetivo: Discutir las evidencias que la literatura presenta sobre la atención a las gestantes diagnosticadas de cáncer de mama y las aportaciones de la Enfermería a la salud de este colectivo. Método: Revisión integradora de la literatura realizada en las bases: Latin American and Caribbean Health Sciences Literature (LILACS), International Health Sciences Literature (MEDLINE) y Scientific Electronic Library Online (SciELO). Resultados: Quince artículos componían la revisión. Se crearon tres categorías de discusión: 1) Cáncer de mama: caracterización sociodemográfica de las gestantes con neoplasia de mama; 2) Principales enfoques diagnósticos y terapéuticos del cáncer de mama en las gestantes; 3) Cuidados de enfermería a las mujeres diagnosticadas de cáncer de mama durante el embarazo. Conclusión: La enfermera debe estar capacitada para identificar las alteraciones no fisiológicas de las mamas, contribuyendo a la detección precoz del cáncer durante las consultas prenatales. A pesar de ello, se han encontrado pocos estudios que aborden los cuidados de enfermería en este contexto.
DESCRIPTORES: Neoplasias de la Mama; Mujeres Embarazadas; Prestación de Atención de Salud; Oncología Médica; Enfermería.

RESUMO
Objetivo: Discutir as evidências que a literatura apresenta sobre a assistência a gestante com diagnóstico de câncer de mama e as contribuições do Enfermeiro para saúde deste grupo. Método: Revisão integrativa de literatura realizada nas bases: Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), Literatura Internacional em Ciências da Saúde (MEDLINE) e Scientific Electronic Library Online (SciELO). Resultados: Quinze artigos compuseram a revisão. Três categorias de discussão foram criadas: 1) Câncer de mama: caracterização sociodemográfica de mulheres grávidas com neoplasia de mama; 2) Principais abordagens diagnósticas e terapêuticas frente ao câncer de mama em mulheres gravidas; 3) Assistência de Enfermagem a mulheres com diagnóstico de câncer de mama na gestação. Conclusão: O Enfermeiro deve ser capacitado a identificar as alterações não fisiológicas nas mamas, contribuindo na detecção precoce do câncer durante as consultas pré-natais. Apesar disto, foram encontrados poucos estudos que abordam a Assistência de Enfermagem neste contexto.
DESCRITORES: Câncer de mama; Gestantes; Assistência à saúde; Oncologia; Enfermagem.

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INTRODUCTION

Breast cancer is the most prevalent malignancy in the female population. In 2018, its global estimate reached 2,1 million new cases. In Brazil, it is estimated that 66,280 new cases of breast cancer occur, for each year of the 2020-2022 triennium. It is, therefore, an important public health problem. [1,2]

Breast cancer diagnosed in the pregnancy-puerperal period (during pregnancy or in a period of up to 12 months after delivery) is called "gestational breast cancer" or "breast cancer associated with pregnancy". Despite being the most common malignancy in women during pregnancy (mainly between 17 and 25 weeks), it is a rare and challenging clinical situation, with an incidence ranging from 1: 3.000 to 1: 10.000 pregnancies. [3,4]

The high incidence rates of breast cancer in Brazil are justified, among other factors, by the late diagnosis and when the woman is in the pregnancy-puerperal period, this diagnosis becomes even more difficult. This is due to the physical and physiological changes that occur in the breasts, specific to pregnancy and that hinder the early identification of breast changes. [4]

Breast cancer in pregnant women goes beyond clinical issues and therapeutic approaches that are difficult to approach, their impacts on women's mental health need visibility. It is a diagnosis that is difficult to notify the user and her family, filled with fears and stigmas and understood as a death sentence, at a time when life would be celebrated with the birth of a new family member, thus, produces antagonistic feelings. [5]

Nursing, for monitoring the patient more closely, is present in different stages and scenarios, acting from primary prevention to post-diagnostic care and rehabilitation, providing holistic assistance. Its role within the multidisciplinary team is also emphasized, in the discussion of cases, in decision-making, in the realization of care plans and in the maintenance of physical and emotional comfort. [5]

In view of this, this study aims to discuss the evidence that literature presents about the assistance to pregnant women diagnosed with breast cancer and the nurse's contributions to the health of these women.

METHOD

This is an integrative literature review. The following guiding question was chosen: What evidence does the literature

artigo

Lima da Silva, D.; Oliveira, G.S.C.; Pires, P.R.S.; Reis, R.V.S.; Souza, R.H.; Soeiro, V.M.S.; Viana, L.S.
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present on assistance to pregnant women diagnosed with breast cancer?

In the construction of the review, the following steps were followed: survey of the research question; literature search; categorization of studies; evaluation of studies included in the review; interpretation of results and presentation of the knowledge synthesis. [6]

For the literature search, carried out in October 2020, the Regional Portal of the Virtual Health Library (VHL) was used, through the combination of the DeSC/MeSH descriptors "Breast cancer" and "Pregnancy", through the Boolean operator AND. The health databases searched were Latin American and Caribbean Literature in Health Sciences (LILACS), International Literature in Health Sciences (MEDLINE) and Scientific Electronic Library Online (SciELO).

The inclusion criteria were: articles indexed in scientific journals published between 2010 and 2020, in Portuguese and Spanish that addressed the proposed theme. Duplicate articles, incomplete texts, theses, monographs, reflection articles, as well as publications that did not address the topic were excluded.

The pre-selection of articles was done by the preliminary reading of titles and abstracts. The pre-selected studies were read in full for the final selection of articles for analysis. After the pre-defined steps, 15 studies were selected to compose the review, according to the flowchart in Figure 1.

The data of the selected articles were recorded individually, with emphasis on author, year, title of the article, methodology.

The review of the process was based on the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyzes (PRISMA) conference list.

RESULTS

The summary and characterization of the articles selected for categorization are presented in Chart 1.

It was observed that the year with the largest number of publications was 2015 (27%) and the most used type of studies was

Figure 1 – Flowchart of search and selection in the databases.
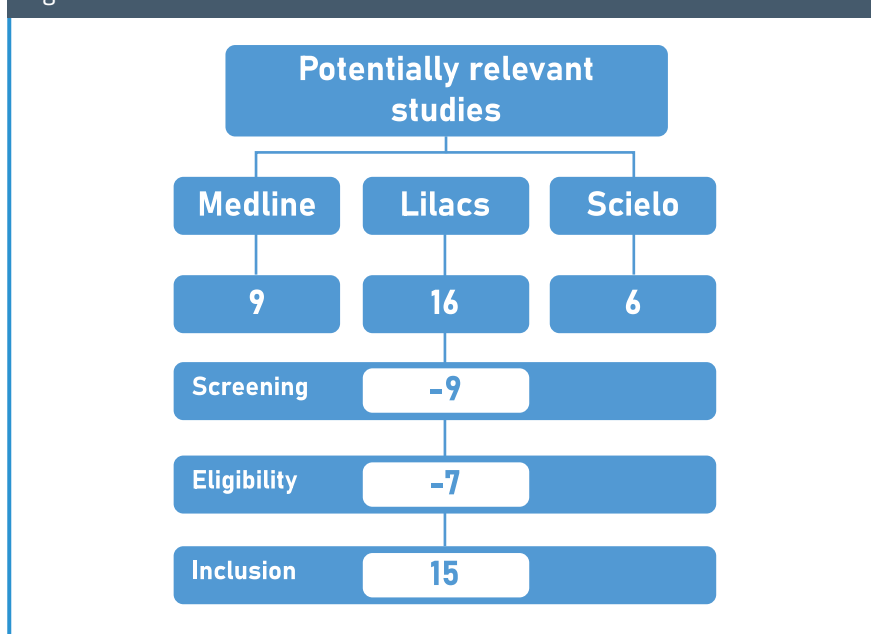
Source: The Authors (2020).

Chart 1 – Summary of selected articles

DATABASE	COUNTRY	TITLE	STUDY TYPE	AUTHOR/ YEAR	JOURNAL AND YEAR OF PUB-LICATION
LILACS	Mexico	Diagnostic-therapeutic approach to breast cancer associated with pregnancy	Literature review	Gallegos-Hernández[7]	Cirugía y Cirujanos (2010)
LILACS	Brazil	Diagnosis of breast cancer during pregnancy: are there any additional difficulties?	Literature review	Alquimim et al.[8]	FEMINA (2011)
SciELO	Brazil	The prognosis of breast cancer in pregnancy: evidence for nursing care	Integrative review	Fernandes et al.[9]	Revista Latino-Am. Enfermagem (2011)
LILACS	Brazil	Breast cancer and pregnancy	Literature review	Martins; Lucarelli[10]	FEMINA (2012)
LILACS	Chile	Study of obstetric, nutritional and hormonal factors and their influence on the development of breast cancer	Retrospective analysis of medical records	González-Jiménez; Montero-Alonso; Riovalle[11]	Rev Med Chile (2013)

SciELO	Brazil	Cancer in pregnancy and chemotherapy: systematic review	Systematic review	Monteiro et al.[12]	Revista da Associação Médica Brasileira (2013)
LILACS	Brazil	Breast cancer associated with pregnancy	Systematic review	Ferreira; Spautz[13]	FEMINA (2014)
MEDLINE	Spain	Breast cancer update in primary care (V/V)	Literature review	García et al.[14]	Medicina de Familia – SEMERGEN(2014)
MEDLINE	Spain	Consensus for breast cancer and fertility	Literature review	Ara et al.[15]	Revista de senología y patología mamaria (2015)
LILACS	Brazil	Characterization and functional capacity of women with gynecological cancer, breast cancer and trophoblastic disease	Retrospective longitudinal study	Elias et al.[16]	Revista Gaúcha de Enfermagem (2015)
MEDLINE	Spain	Selective biopsy of centinella ganglion in a woman with breast cancer	Case report	Fernandez; Zamora; Marcos[17]	Progresos de Obstetricia y Ginecología (2015)
MEDLINE	Spain	Influence of reproductive factors, breastfeeding and obesity on the risk of breast cancer in Mexican women	Case study and control	Navarro-Ibarra et al.[18]	Nutrición Hospitalaria (2015)
MEDLINE	Spain	Neoadjuvant treatment in gestational breast cancer	Bibliographic review and case report	Sánchez et al.[19]	Progresos de Obstetricia y Ginecología (2017)
LILACS	Brazil	Breast cancer in pregnancy: diagnostic and therapeutic approach.	Literature review	Silva et al.[20]	Acta médica – Porto Alegre (2018)
LILACS	Brazil	Factors associated with gestational breast cancer: a case-control study	Observational study	Monteiro et al.[21]	Ciência & Saúde Coletiva (2019)

the bibliographic review (47%). The studies were grouped into thematic categories to expand the discussions, namely (Chart 2):

DISCUSSION

Breast cancer: sociodemographic characterization of pregnant women with breast cancer

According to the literature, gestational breast cancer (GBC) has an incidence rate between approximately 1 to 3 per 10.000, being the most common type of cancer during pregnancy. [7,13,17] This frequency can increase with age, being higher in women over 35 years old. The postponement of the first pregnancy is the most mentioned social aspect in the studies, as this tends to coincide with the characteristic morbidities of age. [12,13,17,20]

As it is a sociocultural characteristic, the age group may vary according to the country. In Mexico, women between the ages of 24 and 44 are the most affected. [7] In a study conducted in Uberaba (MG), the prevalence was

Chart 2 - Categorization of studies	
CATEGORY TITLE	**AUTHORS**
Breast cancer: sociodemographic characterization of pregnant women with breast cancer	Gallegos-Hernández (2010); Montero-Alonso; Riovalle (2013); Monteiro et al (2013); Ferreira; Spautz (2014); Fernandez; Zamora; Marcos (2015); Navarro-Ibarra et al. (2015); Elias et al. (2015); González-Jiménez; Ara et al (2015); Silva et al (2018); Monteiro et al (2019);
Main diagnostic and therapeutic approaches to breast cancer in pregnant women.	Gallegos-Hernández (2010); Alquimim et al. (2011); Martins; Lucarelli (2012); Monteiro et al. (2013); Ferreira; Spautz (2014); Fernandez; Zamora; Marcos (2015); Sanchez et al. (2017); Silva et al (2018);
Nursing care for women diagnosed with breast cancer during pregnancy	Fernandes et al. (2011); Vieira et al. (2012); García et al. (2014).

artigo

Lima da Silva, D.; Oliveira, G.S.C.; Pires, P.R.S.; Reis, R.V.S.; Souza, R.H.; Soeiro, V.M.S.; Viana, L.S.
Evidence for nursing assistance to pregnant with breast cancer: an integrative review

higher among women aged 41 and 50 years. [16] Regarding the level of education, different studies agree that GBC prevails in women with less education and socioeconomic levels. [16,18,21]

The number of children also proved to be influential, the risk of developing breast cancer in women who became pregnant after 35 years old is higher than in nulliparous women of the same age group and twice as high as that of women who became pregnant under 20 years old. Women with 1 child are twice as susceptible to breast cancer as those with 4 or 5 children and the interval of up to 2 years between pregnancies contributes to the decrease in the incidence of breast cancer in pregnancies up to 30 years. [11,21]

There are studies that indicate that for young contraceptive users, there is a slight increase in risk, which decreases after discontinuation of use and after 10 years of discontinuation, while others have shown no relationship between the neoplasia and the contraceptive. [14,17] As for eating habits, it was found that overweight and obesity favor changes in the levels of prolactin and estrogen, so it can be characterized as a risk factor since cancer is directly related to these hormones. [10] Identifying the profile and habits of the pregnant woman assists in early diagnosis even in the basic health unit, since Primary Care is the first service provided by users in the Unified Health System (SUS).

It is worth noting that in addition to these risk factors mentioned above, others referring to behaviors or the environment, such as exposure to ionizing radiation and smoking are already strongly established in national and international literature. As well as behavioral factors, called protective factors, which help to reduce the risk of this type of cancer, such as breastfeeding and physical activity. [2,22]

Main diagnostic and therapeutic approaches to breast cancer in pregnant women

The literature defines GBC as having

a diagnosis that occurred during pregnancy or up to one year after delivery. Because breast cancer screening tests are not part of prenatal routines, diagnosis may be delayed. In addition, the breast changes that occur in a physiological way during the pregnancy cycle (increased breast volume, vascularization and water retention), make it difficult to identify changes during the clinical examination of the breasts and on mammograms. Thus, it is indicated that mammography is performed in the pre-pregnancy period, especially in women with a family history of breast neoplasms. [8,10]

> **It is important to highlight that the performance of prenatal care can be a unique opportunity for the timely identification of breast cancer given the continuous contact between pregnant users and health professionals.**

Biopsy is the only way to find out if a breast disorder is cancer. Puncture technique is performed on the affected breast, using a fine needle, in an outpatient setting, under local anesthesia. However, in some cases, a surgical biopsy is required, which requires general anesthesia, and implies little risk to the fetus. [23] Regarding sentinel lymph node biopsy during pregnancy, there is still no consensus on its effectiveness, since the lymphatic system also undergoes changes due to the gestational process. This technique is associated with radioactive materials, but at non-teratogenic levels, requiring further studies on its safety. [10,13]

The literature indicates that computed tomography and bone scintigraphy have limited use during pregnancy, in view of fetal radiation exposure. When bone metastases are possible, use with limited radiation doses or non-contrast resonance is recommended, as this may affect the fetus. [7,20,23] There is a reluctance of professionals to request radiographic and invasive exams during pregnancy, contributing to late diagnoses. Although there is still much debate about the efficacy of mammography in pregnant women, the literature points out that there is no contraindication in its execution during pregnancy, as it is considered to be low in radiation, as long as there is adequate use of abdominal protective equipment. [7,13] Ultrasound examinations of the breast do not use radiation and are considered safe during pregnancy. As it is more accessible and easy to use at the primary care level, it is usually the first test done to assess a change in the breast. [23]

Among other reasons that can delay the diagnosis, the literature highlights the confusion of nodules with mastitis and the patient's resistance to biopsy. It is important to highlight that the performance of prenatal care can be a unique opportunity for the timely identification of breast cancer given the continuous contact between pregnant users and health professionals. It is necessary

artigo

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to optimize this space as a facilitator of the diagnosis. [7,8,10]

In confirmed cases of breast cancer during pregnancy, the surgical indication follows the same steps recommended in non-pregnant women. [10,13,20] Conservative surgeries require complementary radiotherapy, and in this case, the procedure is teratogenic, being excluded. Chemotherapy should be the most effective option in these cases. For stage I carcinomas, the literature indicates a surgical approach, which can be performed at the end of the third trimester by mastectomy. [10]

As for anesthesia, side effects are minimal for the fetus, occurring in rare cases, impaired fetal growth, abortion and prematurity. In the maternal body, physiological changes related to pregnancy - cardiovascular, pulmonary, diaphragmatic and gastric - can complicate the condition during general anesthesia.[10]

Some authors [13] claim that breast surgery can be safely performed in any trimester of pregnancy with minimal risk for fetal development, from more conservative techniques to mastectomies, the latter being considered the "gold standard". Others, however, indicate that the safest time to perform the surgery is in the second trimester, since in the third trimester there is an increased risk of premature birth due to the stress of the surgery. [12,20] As for breast reconstruction surgery, the selected studies agree that the best option is to perform it after delivery.[10,13]

Regarding chemotherapy, it can be used up to 12 weeks after breast surgery, being contraindicated in the four weeks before delivery, in the first gestational trimester and during lactation. Its use should be discussed individually. [10,12,17]

It is important to highlight that there are no reported cases of breast cancer with a direct effect on the fetus, however, in rare cases, the cancer can reach the placenta, changing its nutritional status. In addition to this risk to the fetus, the use of cytotoxic drugs during pregnancy is related to an increased risk of malformation of the fetus, especially in the first trimester of pregnancy. Its use can be performed with greater safety in the second trimester, however there are reports in the literature of association with fetal deaths and growth restriction, in addition, the effectiveness of chemotherapy is debatable, since maternal physiological changes (hormonal and hepatic) may decrease the plasma concentration of the drug in the maternal organism, interfering with its effectiveness. [13,19]

> **Regarding chemotherapy, it can be used up to 12 weeks after breast surgery, being contraindicated in the four weeks before delivery, in the first gestational trimester and during lactation. Its use should be discussed individually.**

Nursing care for women diagnosed with breast cancer during pregnancy

The nurse is closely related to the good prognosis of breast cancer in pregnancy. During prenatal and postpartum consultations, it is necessary to perform a clinical breast exam, as the professional nurse is qualified to identify non-physiological changes and abnormal breast findings, contributing to the early detection of cancer. However, the literature points out that there is still greater concern with fetal health to the detriment of maternal health during prenatal consultations, reflecting a still hegemonic biologist model. It is necessary to break with these practices, strengthening the humanization of care and offering care that takes into account the social, economic, cultural and physical environment to which the user belongs, as well as the family's participation in decision-making processes.[9]

As competencies of the nurse in assisting pregnant women with breast cancer, the literature points out: comprehensive care; continuous and individualized prenatal assessment; preventive actions and early detection of breast cancer at all levels of care; professional preparation for clinical breast examination; and educational actions with the population. [9]

The approach to breast cancer during pregnancy requires a biopsychosocial character in its management. The literature points out that these users are susceptible to higher levels of stress, and depression and anxiety may occur, especially in the first year of diagnosis. The changes that occur in the body due to the pathogenesis of cancer, added to the physiological changes of the pregnancy, affect the self-image and sexuality of the pregnant woman. Suggested therapeutic resources for these cases are cognitive behavioral therapy, the practice of physical activity, and the implementation of sex education techniques based on the knowledge of one's own body, such as, for example, sexual education workshops conducted by nurses. [9,14]

artigo

Lima da Silva, D.; Oliveira, G.S.C.; Pires, P.R.S.; Reis, R.V.S.; Souza, R.H.; Soeiro, V.M.S.; Viana, L.S.
Evidence for nursing assistance to pregnant with breast cancer: an integrative review

In this context, the practice of Nursing Assistance brings a unique opportunity for listening and welcoming, enabling the identification of warning signs, as well as the guidance of care and educational practices. Through a psychosocial approach, the Nurse as a member of a multidisciplinary team, can also contribute to the construction of unique therapeutic projects aimed at improving the quality of life of pregnant women diagnosed with breast cancer.

There are still few studies that address Nursing Assistance in this context, with the need to conduct studies aimed at the performance of the Nursing team, thus promoting improvement of care in the context of health care. [9]

CONCLUSION

As it is one of the nurses' competencies to perform prenatal care in Primary Health Care, this professional must be trained to identify non-physiological changes and abnormal findings in the breasts. Being a contributor in the early detection of cancer during consultations, since the good prognosis is related to the timely diagnosis through the identification of alerts and guidance of care.

Thus, the performance of the nursing professional contributes significantly to coping with cancer as a public health problem. Despite the unique contribution that this category can provide, few studies have focused on understanding Nursing Assistance in this context. ◾

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