





REVIEW

Nursing care for pregnant women diagnosed with COVID-19

Cuidados de enfermería en gestantes con diagnóstico de COVID-19

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ABSTRACT

Introduction: the nursing intervention is fundamental in pregnant women con COVID-19, focusing on preventing and detecting complications early. Nursing staff provides direct care to the patient, family, and community, applying principles such as early isolation, aggressive infection control, oxygen therapy, and fetal assessment. In addition, emotional support for the pregnant woman and her environment is vital to face isolation and concerns related to pregnancy and infection.

Objective: to characterize nursing care in pregnant women diagnosed with COVID-19.

Method: a bibliographic review was conducted in databases such as PubMed, Google Scholar, and ResearchGate, using keywords including pregnancy, pregnant woman, COVID-19, nursing, and nursing care. Twenty articles were selected, from which relevant information was extracted.

Discussion: pregnancy is a unique immunological state that faces challenges to maintain tolerance to the fetus and defense against microbial agents. The care of these pregnant women requires multidisciplinary teams, maternal-fetal monitoring, and integral management. Nursing must offer humanized care, respiratory monitoring, vital signs control, oxygen therapy, and emotional support. Specialized training is key, especially in management. Promotion and prevention in the community, led by nursing, are essential to reduce risks and ensure safe pregnancies.

Conclusions: nursing care in pregnant women con COVID-19 requires an integral intervention based on clinical protocols and humanized care. Constant monitoring, early detection of complications, protecting the mother-child binomial.

Keywords: Pregnancy; Pregnant Women; COVID-19; Nursing; Nursing Care.

RESUMEN

Introducción: la intervención de enfermería es fundamental en gestantes con COVID-19, enfocándose en prevenir y detectar complicaciones de forma precoz. El personal de enfermería brinda cuidados directos al paciente, familia y comunidad, aplicando principios como aislamiento temprano, control agresivo de infecciones, oxigenoterapia y valoración fetal. Además, el apoyo emocional a la gestante y su entorno es vital para enfrentar el aislamiento y preocupaciones relacionadas con el embarazo y la infección.

Objetivo: caracterizar los cuidados de enfermería en gestantes diagnosticadas con COVID-19.

Método: se realizó una revisión bibliográfica en bases de datos como PubMed, Google Académico y ResearchGate, usando palabras clave como embarazo, gestante, COVID-19, enfermería y cuidados de enfermería. Se seleccionaron 20 artículos, de los cuales se extrajo información relevante.

Discusión: el embarazo es un estado inmunológico único que enfrenta retos para mantener tolerancia al feto y defensa contra agentes microbianos. La atención de estas gestantes requiere equipos multidisciplinarios,

vigilancia materno-fetal y manejo integral. La enfermería debe ofrecer cuidado humanizado, monitoreo respiratorio, control de signos vitales, oxigenoterapia y apoyo emocional. La formación especializada es clave, especialmente en su manejo. La promoción y prevención en la comunidad, guiadas por enfermería, son esenciales para reducir riesgos y garantizar embarazos seguros.

Conclusiones: el cuidado de enfermería en gestantes con COVID-19 exige una intervención integral, basada en protocolos clínicos y cuidado humanizado. La vigilancia constante, detección precoz de complicaciones y apoyo emocional son esenciales. El rol del profesional de enfermería es determinante en la protección del binomio madre-hijo.

Palabras clave: Embarazo; Gestante; COVID-19; Enfermería; Cuidados de Enfermería.

INTRODUCTION

COVID-19, also known as coronavirus, belongs to a large family of viruses that can cause various conditions, from the common cold to more serious diseases such as severe acute respiratory syndrome (SARS-CoV-2).^(1,2)

On December 31, 2019, Chinese authorities reported cases of pneumonia of unknown etiology in Hubei province; the clinical picture presented by these patients was fever, dry cough, dyspnea, and radiological findings of bilateral pulmonary infiltrates.⁽³⁾ Due to the rapid progression and presence of the disease in more than 100 countries, the World Health Organization (WHO) declared it a pandemic on March 11, 2020.⁽⁴⁾

Some preexisting conditions that contribute to the progression and severity of COVID-19 are chronic degenerative diseases such as diabetes mellitus, high blood pressure, and chronic kidney disease, to name a few. However, there are other circumstances, such as the immunosuppression that occurs during pregnancy, which alters the immune system and, consequently, the response to viral infections such as SARS-CoV-2, which can be related to a severe clinical picture.⁽³⁾

In Latin America in 2020, there were 60,458 cases among pregnant women, of whom 446 died.⁽⁴⁾ It has been established that the mortality rate in the general population has increased by 10 %, while among pregnant women it has increased by 25 %.⁽²⁾

A pregnant woman is considered positive for COVID-19 when she tests positive in a polymerase chain reaction (PCR) test, whether she is asymptomatic or has suspicious clinical symptoms.⁽⁶⁾

It should be noted that if a pregnant woman has comorbidities such as high blood pressure or diabetes mellitus and becomes infected with this virus, the risk of complications increases.⁽⁴⁾ Other authors;⁽⁷⁾ specify bronchial asthma as an important risk factor in the development of complications.

Most reported cases of COVID-19 worldwide are transmitted from person to person through direct contact with objects or surfaces contaminated with the virus, *flügge* droplets, aerosols, and vertical transmission from pregnant women to fetuses.⁽³⁾ Although the latter route of transmission is possible, it appears to occur in a minority of cases.

Until now, it has been considered a disease with a high social cost, not only because it has become a pandemic, but also because it requires a high level of technical complexity in its management and treatment, which represents a major commitment on the part of nursing professionals.⁽¹⁾

Nursing intervention is essential because care is provided directly to the patient, family, and community. In the case of pregnant women infected with COVID-19, their actions focus on preventing and detecting complications early in order to intervene in a timely and effective manner.^(6,10)

The principles of managing COVID-19 disease in pregnancy include: early isolation, aggressive infection control procedures, oxygen therapy, avoiding fluid overload, consideration of empirical antibiotics, laboratory testing for the virus and co-infection, and assessment of fetal and uterine contractions.⁽⁶⁾

In this context, caring for pregnant patients with COVID-19 is even more difficult, as the administration of certain drugs and the performance of radiological studies may be counterproductive in their condition. In addition, the mandatory social isolation they must undergo can affect their mood, not only because of the separation from their family unit, but also because of concern for their unborn child. This is where nursing staff, based on humane care, must provide support to both the pregnant woman and her family environment, who are also significantly affected.

In this context, the nursing care process is a mandatory tool aimed at diagnosing patients' needs and planning actions to address them.⁽⁸⁾

Nursing care plays an essential role in protecting maternal and fetal health by providing comprehensive, timely, and humanized care that mitigates the risks and complications associated with COVID-19 in pregnant women. The ability of nursing professionals to identify warning signs, apply specific protocols, and provide emotional support is crucial to the prognosis of these patients. Therefore, the objective of this research was to characterize nursing care in pregnant women diagnosed with COVID-19.

METHOD

A literature review was conducted by accessing databases such as PubMed, Google Scholar, and ResearchGate using keywords including pregnancy, pregnant women, COVID-19, nursing, and nursing care, combined with the Boolean operator AND. A total of 20 articles were selected, of which more than 70 % were published in the last 5 years. Relevant information was extracted, summarized, and organized to support the development of this research.

DISCUSSION

Pregnancy is considered a unique immunological state. During this period, the maternal immune system faces multiple challenges, including establishing and maintaining allogeneic tolerance to the fetus while preserving its ability to protect itself against various microbial agents.⁽¹¹⁾

The most frequently described clinical manifestations in pregnant women diagnosed with or suspected of having COVID-19 are fever, fatigue, myalgia, dry cough, and respiratory distress. A minority of patients present with nasal congestion, odynophagia, and diarrhea.⁽¹¹⁾ The authors argue that, in most cases, pregnant women diagnosed with COVID-19 are asymptomatic, which poses a challenge for timely detection and clinical follow-up.

Pregnant women who are obese, older, or have diabetes mellitus and high blood pressure due to their condition are more likely to acquire and suffer complications from the virus and should therefore be considered a high-risk group for healthcare.⁽¹²⁾

It should also be noted that the risk of a woman contracting COVID-19 in early pregnancy is not the same as in the last trimester. During the third trimester, women experience more symptoms and complications from maternal COVID-19 infection.⁽⁴⁾

The need for pregnant women to require intensive care when infected with COVID-19 is slightly higher than that of infected non-pregnant women of childbearing age.^(2,8)

These patients are at higher risk of developing a severe form of COVID-19 and, in some cases, may experience maternal and newborn complications such as: hypertensive disorders (preeclampsia, gestational and chronic hypertension), diabetes mellitus (gestational, type 1, and type 2), placental abnormalities (placenta previa, placenta accreta, and premature placental abruption), preterm labor, fetal distress, premature rupture of membranes, requirement for mechanical ventilation, multiple organ failure, and even death.⁽³⁾ In addition, because they are susceptible, severe congenital damage is likely to occur.⁽²⁾

There is also literature that specifies that pregnancy does not increase the likelihood of complications related to COVID-19, although some have been described.^(14,15) The authors suggest that pregnant women should be considered high-risk patients and treated as such, based on the physiological and immunological changes inherent to pregnancy that may predispose them to an unfavorable clinical outcome in the event of viral infections such as COVID-19.

The management of pregnant women infected with SARS-CoV-2 should be carried out by a multidisciplinary team, which establishes the most appropriate place for the correct treatment of the mother-fetus pair and allows for control and prompt action in the event of maternal or fetal deterioration or the onset of premature labor.⁽¹⁶⁾

Pregnant women diagnosed with COVID-19 should be considered immediate care patients in health services, as their condition poses risks to both the mother and the fetus. Their management requires the intensive use of clinical, technological, and human resources aimed at preserving the stability of the pair and preventing serious complications during pregnancy.

Nursing interventions in the comprehensive care of pregnant women diagnosed with COVID-19

Nursing care has evolved significantly over the years and is currently based on specific, highly structured protocols and plans to ensure consistency.⁽¹⁷⁾

Nursing intervention must transcend institutional academic protocol and avoid treating the pregnant woman as an isolated clinical case. It is essential to recognize her as a future mother who is going through a crucial moment in her life and who requires comprehensive support.⁽¹⁾

When exploring the structure of nursing care, there is a tendency toward automated practices that do not always respond to patients' emotional needs.⁽¹⁾ The authors believe that this perception of automated practices in nursing care was intensified during the COVID-19 pandemic, when work overload, the collapse of health services, and pressure to provide care forced staff to prioritize technical and protocol-based care.

Implementing high-quality care interventions and continuously improving them to effectively and efficiently address the challenge of maternal and neonatal care is vital and guides the healthcare team's care decision-making. The objective of establishing priorities is to decide which of these issues the nurse should address in order to resolve all or some of the problems, depending on the time available, the situation, and the condition of the pregnant woman.⁽¹⁸⁾

The staff in charge of these patients must follow the current recommendations of the CDC (*Centers for Disease Control and Prevention*) and the WHO, taking all necessary precautions to prevent contagion, using appropriate personal protective equipment (face shield, mask, gown, and gloves).⁽¹¹⁾ The authors believe that it is crucial to protect healthcare personnel, considering that their infection compromises the continuity of care, reduces the operational capacity of the system, and exposes vulnerable patients such as pregnant women to greater risk.

Healthcare personnel, including nurses, must be attentive to the patient's personal history, such as whether she has traveled or been in contact with infected patients, and whether she has symptoms such as fever, general malaise, cough, loss of smell or taste, among others. Thus, pregnant women who have been confirmed with COVID-19 or are suspected cases should be notified so that they can be treated according to established guidelines.⁽⁴⁾

The most common nursing activities to be performed in such a diagnosis are: isolation in rooms equipped for COVID-19 patients, providing the correct emotional support to both the patient and her family members, monitoring vital signs, identifying early signs and symptoms that indicate a worsening or complication of the pregnant woman's condition, monitoring oxygen saturation and applying oxygen therapy if warranted, administering medication, Nutrition and hydration are a fundamental part of nursing care, as are encouraging activity, rest, and sleep in the patient. There is also the protection of healthcare personnel and maintaining strict hand hygiene.⁽⁶⁾

Some authors describe nursing activities and patterns of action for pregnant women diagnosed with COVID-19, focusing specifically on respiratory patterns. These include: monitoring the frequency, rhythm, depth, and effort of breathing; observing whether the patient has noisy breathing, such as stridor or snoring; observing whether there is diaphragmatic muscle fatigue; monitoring breathing patterns: bradypnea, tachypnea, hyperventilation, types of breathing; monitoring oxygen saturation levels; observing whether restlessness, anxiety, or shortness of breath increases; noting the onset, characteristics, and duration of coughing.

SARS-CoV-2 infection is not an indication for cesarean section; the mode of delivery is decided based on usual obstetric indications and the patient's general condition, but strictly speaking, it should not be influenced by the presence of the disease. During labor in patients infected with the virus, it is recommended that nurses supplement with oxygen via a nasal cannula to maintain saturation >95 %. It is recommended to continuously monitor symptoms and their severity. In addition, these patients should be kept under continuous cardiotocographic monitoring.^(11,19)

It is vital that the nursing care process be carried out through the implementation of preventive care plans, support, and complication management during the perioperative process, where we can find various nursing diagnoses. Hence the importance of training nursing staff specialized in surgical care, who, in addition to being an essential part of the team and contributing their theoretical and practical knowledge, also participate in the holistic care of pregnant patients and meet the needs of those undergoing surgery.⁽³⁾

The authors highlight the importance of comprehensive training for nursing professionals in the preoperative, intraoperative, and postoperative management of pregnant women diagnosed with COVID-19, as well as in the care of possible complications. This need is supported, among others, by studies such as that by Cupul;⁽²⁰⁾ conducted in 2022, which showed that 51 % of infected pregnant women completed their pregnancies by cesarean section, reaffirming the essential and specialized role of nursing at this critical stage of pregnancy.

It is also mentioned that healthcare personnel must participate with all biosafety measures and the patient must wear a surgical mask. In the absence of maternal or fetal compromise, labor should continue, and standard obstetric care should be provided by the nursing staff.⁽⁴⁾

One of the main causes of preterm birth in pregnant women with COVID-19 is stress, so it is necessary for nursing staff to be prepared and take measures to provide coping mechanisms and tolerance. These activities include providing emotional support throughout labor, using a calm approach that provides reassurance, and providing objective information about diagnosis, treatment, and prognosis.⁽⁴⁾

It is also necessary to listen to the patients' opinions, discuss the emotional experience with them, and thus facilitate the identification of the usual coping pattern.⁽¹⁸⁾

Providing an explanation and information to the expectant mother by nursing staff during care and treatment is considered a humanizing activity. A lack of communication can trigger a state of anxiety in the patient and weaken the emotional bond between the nursing staff and the woman in labor.⁽¹⁷⁾ The authors believe that the mental health of pregnant women is particularly important during the pandemic, with emotional support from nursing staff being a fundamental pillar of their well-being. This support promotes psychological stability, reduces the risk of preterm birth, and strengthens the therapeutic bond, as mentioned above.

During the most critical period of the pandemic, nursing professionals played a leading role in healthy pregnancy monitoring and home care for uncomplicated births, bearing in mind that these are elements conceived in community nursing practice.⁽⁷⁾

In this case, the health promotion and prevention actions carried out by healthcare workers, including

nurses, were vital. They consisted primarily of keeping pregnant women informed about the main preventive measures against this virus, as one of the routes of transmission is respiratory and it is also very contagious, making it urgent and important to know the basic health protection measures against coronavirus.⁽⁷⁾ The authors highlight that, in the context of the pandemic, the promotion and prevention actions led by nursing staff were essential to ensuring a safe pregnancy. Constant guidance on protective measures, hygiene, and infection control reduced risks for pregnant women, highlighting the essential role of nursing in community care and health education as a key tool in the fight against COVID-19.

Among the main limitations of this study are its nature as a literature review, the fact that only articles in English and Spanish were reviewed, and that priority was given to those published in the last 5 years. As a future projection, we suggest conducting experimental studies to evaluate the effectiveness of different nursing action models in at-risk populations, such as pregnant women diagnosed with COVID-19.

CONCLUSIONS

Nursing care for pregnant women with COVID-19 requires a comprehensive intervention based on clinical protocols and humanized care. These patients should be considered high risk, which implies constant monitoring, early detection of complications, and emotional support. The role of the nursing professional is key in protecting the mother-child dyad, both in the hospital and community settings, through structured actions, specialized training, and continuous monitoring.

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