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An approach to breastfeeding for mothers infected with the SARS-CoV-2: an integrative review

Manejo de la lactancia materna de madres infectadas con el virus SARS-CoV-2: una revisión integradora

Manejo do aleitamento materno de mães infectadas pelo vírus SARS-CoV-2: uma revisão integrativa

ABSTRACT

Objectives: to understand the evidence available regarding breastfeeding for mothers who test positive for Covid-19. Methodology: this article is an integrative review using three databases, in three languages with three different combinations of keywords related to health were applied. The search pulled up 135 articles, six of which met the criteria of inclusion. Results: the presence of SARS-CoV-2 has not so far been registered in human breast milk. Breastfeeding is recommended, along with preventative measures.

DESCRIPTORS: Breastfeeding; Coronavirus Infections; Milk, Human; Pandemics.

RESUMEN

Objetivos: comprender la evidencia disponible sobre la lactancia materna para una madre covid-19 positiva. Metodología: Esta es una revisión integradora, realizada en tres bases de datos, en tres idiomas, con tres combinaciones distintas de descriptores en salud. La búsqueda resultó en 135 artículos, de los cuales 6 cumplieron los criterios de inclusión. Resultados: No existen registros de la presencia de SARS-CoV-2 en la leche humana hasta el momento. La lactancia materna con medidas protectivas es indicada.

DESCRIPTORES: Lactancia Materna; Infecciones por Coronavirus; Leche Humana; Pandemias.

RESUMO

Objetivos: compreender as evidências disponíveis acerca da amamentação da mãe covid-19. Metodologia: Trata-se de uma revisão integrativa, feita três bases de dados, em três idiomas com três diferentes combinações de descritores em saúde. A busca resultou em 135 artigos, dos quais 6 atenderam os critérios de inclusão. Resultados: Não existem registros de presença de SARS-CoV-2 no leite humano até o momento. O aleitamento materno com medidas de prevenção é indicado.

DESCRIPTORIOS: Aleitamento Materno; Infecções por Coronavirus; Leite Humano; Pandemias.

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INTRODUCTION

In December 2019, the city of Wuhan in China reported the first case of an unknown disease that would later be called COVID-19. The disease is caused by a new type of Coronavirus, the SARS-Cov-2⁽¹⁾. The disease quickly crossed the borders of Chinese territories and, on March 12, 2020, the World

Health Organization (WHO) declares the event as pandemic⁽²⁾. The pandemic, according to WHO data, of May 21, 2020, brings together 4,904,413 cases worldwide, being responsible for 323,412 deaths⁽³⁾.

The transmission of the virus occurs through droplets and can be transmitted by an infected person, symptomatic or not⁽⁴⁾, to another that is less than a

meter away. There is still no consistent evidence to support the possibility of aerosol transmission, however, precautions involving procedures involving aerosol production must be taken. There is also evidence to support the transmission of SARS-Cov-2 via faeces⁽⁵⁾.

The pandemic situation mobilized several health entities around the world to better understand and combat COVID-19⁽²⁾.

Mothers with suspicion or confirmation of COVID-19 should be advised on measures to prevent transmission, both when living with their baby and when breastfeeding⁽⁷⁾.

text of COVID-19, the act of breastfeeding should be the choice of the mother and family, with the appropriate guidance of a health professional⁽⁷⁾. Several academic authority entities advocate for the maintenance of breastfeeding and emphasize that the benefits of breastfeeding outweigh the risks⁽⁸⁾.

Mothers with suspicion or confirmation of COVID-19 should be advised on measures to prevent transmission, both when living with their baby and when breastfeeding⁽⁷⁾. Among the options, the possibility of milking milk and offering milk in a spoon or cup, by an uninfected family member and outside the population at increased risk for the development of Severe Acute Respiratory Syndrome (SARS), is also configured among the options. In the case of pump milk extraction, it should be oriented when cleaning the equipment⁽⁶⁻⁸⁾.

This study is justified by the poignant need to gather information and scientific evidence on the topic of breastfeeding in the pandemic context. With the guiding question of the work: What is the current scientific validity information that allows to guarantee the safety of breastfeeding in the face of the pandemic?

The article aims to understand the recent discussions and available evidence about breastfeeding the positive mother COVID-19. It also aims to investigate

whether the benefits outweigh the risks when it comes to breastfeeding in the specific context of community transmission of COVID-19 worldwide.

METHODOLOGY

An integrative review was carried out, whose study modality is important for guiding decision-making in relation to the care practices of nursing and health professionals as a whole⁽⁹⁾.

The articles were collected in May 2020 in three different databases, namely: Scientific Electronic Library Online (SciELO), Virtual Health Library (VHL) and PubMed.

The choice of descriptors was made based on the Health Sciences Descriptors (DeCS). The corresponding descriptors were chosen in three languages: Portuguese, English and Spanish. The combination of descriptors, using the Boolean operator tool "AND" are expressed in the following Chart 1. The descriptors are represented in Portuguese, however, it is important to emphasize that the search was carried out in the chosen databases with the corresponding descriptors in English. and Spanish.

In total, 135 articles were screened. After removing duplicate articles, there were 93 articles. A pre-analysis was carried out, with reading of abstracts and, according

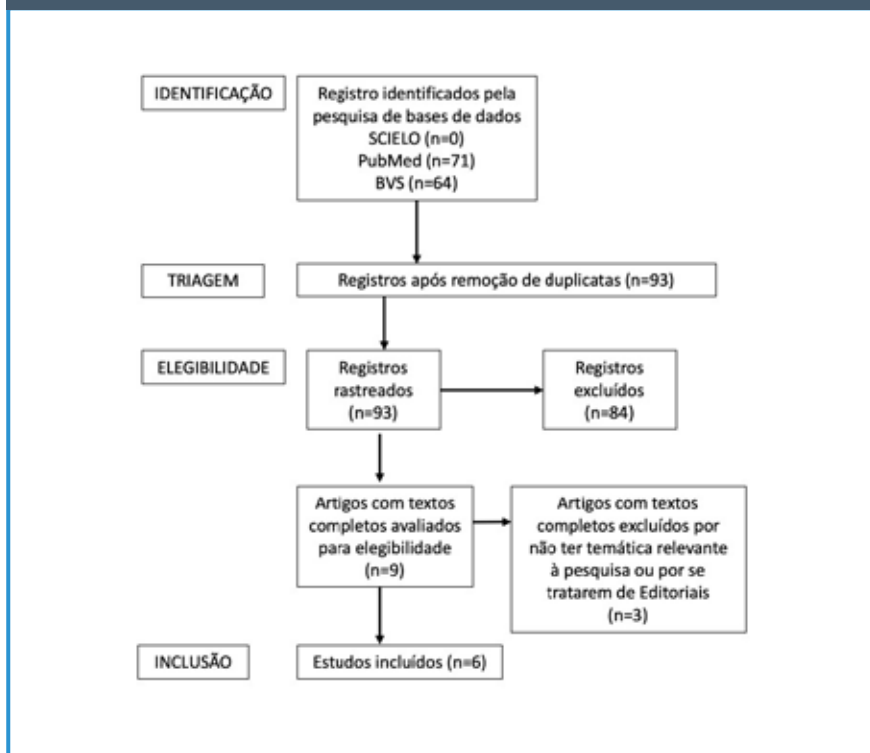
Chart 1. Article tracking. Rio de Janeiro, RJ, Brazil, 2020

DESCRITORES	BASE DE DADOS	NÚMERO DE ARTIGOS ENCONTRADOS
"Infecção por Coronavírus" AND "Aleitamento Materno"	SciELO	0
	PubMed	10
	BVS	28
"Infecção por Coronavírus" AND "Leite Humano"	SciELO	0
	PubMed	13
	BVS	28
"Infecção por Coronavírus" AND "Lactação"	SciELO	0
	PubMed	48
	BVS	8

It became necessary to look at breastfeeding and the possibility of transmission of the virus through human milk. Although there is no solid scientific evidence to date, human milk does not appear to transmit the virus. However, mother-to-baby transmission is increased by the close contact that the moment of breastfeeding promotes⁽⁶⁾.

It is known that breast milk is the best source of food for babies and, in the con-

Flowchart 1. Selection of articles. Rio de Janeiro, RJ, Brazil, 2020



to the non-compliance with the inclusion criteria, 84 articles were excluded, leaving 09 articles for full reading.

The inclusion criteria to compose this integrative review were that in order to be chosen, the study should: be available online for free; be in the format of a scientific article; be written in Portuguese, English or Spanish, have relevance to the topic and have been published in the year 2020. After a thorough analysis and application of the criteria, 06 articles were selected.

RESULTS

The article was built based on the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology. The selection of articles for the composition of this integrative review was organized in the Flowchart 1.

The six selected articles were organized in Chart 2, where the main results of each study are presented, in a succinct way.

Chart 2. Results. Rio de Janeiro, RJ, Brazil, 2020

	PERIÓDICO E ANO DE PUBLICAÇÃO	AUTORES	TÍTULO	PRINCIPAL RESULTADO
Artigo 1	The Lancet, 2020.	Chen H, Guo J, Wang C et al.	Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records.	Amostras de leite materno de seis pacientes Covid-19 positivas não apresentaram presença do vírus SARS-Cov-2 no leite humano.
Artigo 2	Breastfeeding Medicine, 2020.	Salvatori G, De Rose DU, Concato C et al.	Managing COVID-19-Positive Maternal-Infant Dyads: An Italian Experience.	A transmissão do vírus SARS-Cov-2 entre o binômio mãe bebê parece estar melhor associada à transmissão horizontal.
Artigo 3	Italian Journal of Pediatrics, 2020.	De Rose DU, Piersigilli F, Ronchetti MP et al.	Novel Coronavirus disease (COVID-19) in newborns and infants: what we know so far.	A evidência disponível não é suficiente para descartar a possibilidade da transmissão do vírus pelo leite humano.
Artigo 4	Journal of Perinatology, 2020.	Mimouni F, Lakshminrusimha S, Pearlman SA et al.	Perinatal aspects on the covid-19 pandemic: a practical resource for perinatal-neonatal specialists	A presença de SARS-Cov-2 no leite humano não foi documentada até o momento.
Artigo 5	Pan American Journal of Public Health, 2020.	Martins-Filho PR, Santos VS, Santos Jr HP.	To breastfeed or not to breastfeed? Lack of evidence on the presence of SARS-CoV-2 in breastmilk of pregnant women with COVID-19.	Não há consenso entre as instituições de saúde sobre a transmissão de SARS-Cov-2 pelo leite materno.
Artigo 6	Pan American Journal of Public Health, 2020.	Duran P, Berman S, Niermeyer S et al.	COVID-19 and newborn health: systematic review.	Mães positivas para Covid-19 não justifica suspensão da amamentação.

DISCUSSION

The presence of SARS-CoV-2 virus in breast milk has not been documented to date⁽¹⁰⁾. The main study, of notoriety in the main Brazilian and international guidelines, brings the sample of six COVID-19 positive patients in the third gestational trimester whose human milk analyzed did not present the presence of the virus⁽¹¹⁾. Other studies bring negative results, one of them reports 30 milk samples analyzed⁽¹²⁾.

Although the main guidelines, such as the CDC, RCOG and WHO, use these studies as a basis, it is impossible to state until now that breast milk cannot be a route of transmission of the virus, since the evidence is still limited⁽¹³⁾. However, there are not enough data to contraindicate breastfeeding, the benefits seem to outweigh the risks⁽¹⁴⁾.

The theme is controversial and this is reflected by behaviors that differ from each other. The National Health Commission of China recommends the isolation of suspected and confirmed newborns of COVID-19 in cohort wards for 14 days. This conduct is criticized since it can lead to unfavorable neonatal outcomes for suspected cases, in which there is no SARS-CoV-2 infection⁽¹⁵⁾.

Considering what seems to be a consensus among important scientific institutions of maternal and child health, it is recommended that the mother infected by the virus be advised to initiate or maintain breastfeeding with some protective measures to prevent mother-to-baby transmission by droplets, the use of a mask, enhanced hand hygiene before contact with the baby and a distance of 2 meters when sleeping for 14 days⁽¹²⁻¹⁴⁾. The promotion of breastfeeding remains beneficial. It is important to always assess the dru-

The presence of SARS-CoV-2 virus in breast milk has not been documented to date⁽¹⁰⁾. The main study, of notoriety in the main Brazilian and international guidelines, brings the sample of six COVID-19 positive patients in the third gestational trimester whose human milk analyzed did not present the presence of the virus⁽¹¹⁾.

gs used by the mother and to assess whether they are compatible with breastfeeding⁽¹²⁾.

In mothers where COVID-19 manifests itself in more severe forms and breastfeeding is impossible, it is preferable to do the milking of the milk, paying attention to hand hygiene and the breast pump - if used^(10,12) - and the milk can be offered by a third party, as long as it is healthy⁽¹⁴⁾. When this scenario is not a possible option, the search for a human milk bank appears as a possibility⁽¹⁵⁾.

CONCLUSION

Although it cannot be said that breast milk is free from the SARS-CoV-2 virus due to the limited sampling of the available studies, there is no data, to date, that would allow us to tend to the conclusion that the virus is present in human milk.

The option to initiate or continue breastfeeding, at the time of maternal virus infection, should be a maternal decision, together with the family and health professionals. Women should be instructed in favor of the practice and oriented in terms of protection measures and alternative possibilities to the breast supply.

The benefits of breast milk from infected mothers outweighed the risks of choosing not to offer this milk, according to what the scientific evidence brings to date. In cases where it is impracticable to milk and offer the baby the mother's milk, the human milk banks appear as a possibility to be considered.

The knowledge of the theme still leaves many knowledge gaps to be filled, further studies are suggested, with larger samples in which the presence of the virus in human milk is tested. It would be beneficial to carry out studies that bring the horizontal transmission rate between mothers and breastfeeding babies.

This review had limitations, as it is a current topic and it is a disease that appeared less than six months

ago. However, the data brought are a reflection of the existing knowledge about breastfeeding in associa-

tion with COVID-19 until the present moment. ■

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