



REVIEW ARTICLE

Effects of COVID-19 on breastfeeding in Chile during 2020

Efectos de la COVID-19 en la lactancia materna en Chile durante el 2020

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ABSTRACT

Currently in Chile and in much of the planet a respiratory infection that has caused a great impact, known as coronavirus or COVID-19, is being experienced. The present review aimed to describe the influence of COVID-19 on breastfeeding in Chile during 2020. To date, there is no scientific evidence that reveals the presence of COVID-19 in breast milk. It is recommended to continue breastfeeding in the absence or presence of COVID-19, but with all hygiene and safety measures directed by the health authority. A total of 34 articles were published.

Keywords: Coronavirus Infections; Polymerase Chain Reaction; Breast Feeding

RESUMEN

Actualmente en Chile y en gran parte del planeta se está viviendo una infección respiratoria que ha causado un gran impacto, conocida como coronavirus o COVID-19. La presente revisión tuvo como objetivo describir la influencia del COVID-19 en la lactancia materna en Chile durante el año 2020. Hasta el momento no existe evidencia científica que revele la presencia de COVID-19 en la leche materna. Se recomienda seguir con la lactancia en ausencia o presencia de COVID-19, pero con todas las medidas higiénicas y de seguridad orientadas por la autoridad sanitaria. Se ciaron un total de 34 artículos.

Palabras clave: Infecciones por Coronavirus; Reacción en Cadena de la Polimerasa; Lactancia Materna.

INTRODUCTION

A new pandemic is currently being experienced worldwide, Covid-19, which corresponds to an emerging viral infectious-contagious disease with high mortality rate, which being highly contagious, has contributed to the collapse of healthcare systems in different parts of the world.⁽¹⁾

Thus, this disease is subject to rigorous research, since it is causing new signs and symptoms in people, which makes treatment more complex. In addition, this virus is causing great changes in the activities we usually carry out as human beings, which of course, also includes pregnant women and mothers who are breastfeeding, who besides being afraid of infection, fear for the life of their son or daughter.

The world is currently experiencing a highly contagious respiratory infection that has caused a major international impact and damage, where the virus was officially named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and the disease it causes is known as Covid-19, which the World Health Organization has declared a pandemic.⁽²⁾ In Chile, all prevention strategies have been implemented and regarding the progress of the immunization process against Covid-19, the information issued by the Ministry of Health reported that as of April 8, 2021, 7,206,185 people have been vaccinated, and 4,332,300 people have completed their vaccination process. Meanwhile, 2,932,907 people over 60 years old have been inoculated against SARS-CoV-2. However, there are no figures on the percentage of women who are exclusively breastfeeding, nor has vertical transmission of the virus been confirmed.⁽³⁾

Even though, there are few studies worldwide to determine the presence of the virus in breast milk. However, all of them proved to be negative for the presence of the virus.^(4,5)

Covid-19 can cause a common cold as well as severe acute respiratory failure, the main symptoms of which are fever over 38°C, dry cough, difficulty breathing, sore throat, diarrhea and headaches. The virus can be spread from person to person, by being with an infected person or by the spread of droplets from a sneeze or cough of another infected person, so it is important to maintain the stipulated distance that corresponds to one meter. It can also be due to these droplets remaining on the surfaces of furniture, food or clothing, and the virus can also circulate through the air, therefore, safety measures should be greater, since it can cause death, especially in a patient who is immunosuppressed.⁽⁶⁾

A major feature of Covid-19 is that children and adolescents tend to be less infected by SARS-CoV-2 compared to adults. Children do not play a critical role in the transmission of the virus, and those who have contracted the virus have been asymptomatic or have mild symptoms.⁽⁷⁾ Of course, in some cases it can be fatal, especially in children with comorbidities, where it can lead to Pediatric Inflammatory Multisystem Syndrome (PIMS).⁽⁸⁾

Adequate breastfeeding during the first years of life is essential for proper growth and development, as it provides many benefits, including potential mother-child antibody transfer from mother to child against Covid-19.

METHODS

This article presents a descriptive review of the history of breastfeeding and Covid-19. For this purpose, a search was conducted in Medline, Cochrane and Scholar using the following logical operators: "Breastfeeding and Covid-19", "early weaning and COVID-19"; addition to consulting governmental sources such as WHO and Ministry of Health (MISAL).

DEVELOPMENT

The diagnosis of Covid-19 is made by the analysis of clinical symptoms, radiological findings and laboratory tests, which may include techniques such as real-time reverse transcription-polymerase chain reaction (RT-PCR) and also serological tests that detect the immunoglobulins that are specific to the coronavirus in order to diagnose it.

In patients with Covid-19, increased levels of C-reactive protein, erythrocyte sedimentation rate, lactate dehydrogenase, creatinine and prothrombin levels with extended time can be evidenced. Chest computed tomography (CT) is also used, which provides good results for diagnosis, since, in patients with Covid-19, a frequent characteristic is ground-glass opacity of the pulmonary image, among others. This situation occurs not only in people who present symptoms, but also in those who are asymptomatic and those who show a negative result in the RT-PCR test, but who continue to present some type of symptoms.⁽⁹⁾

Currently, treatment of Covid-19 is focused on treating mainly the respiratory failure characteristic of acute respiratory distress syndrome, which occurs in approximately 50 % of infected persons and is one of the main sources of mortality in these patients.⁽¹⁰⁾

One study ⁽¹¹⁾ showed that people with cardiovascular disease are more adversely affected by Covid-19 positivity. The prevention and control of the pandemic corresponds to individual medical care, with the aim of protecting them from the virus, being able to detect the virus early, find out the close contacts of the patient, advise on isolation, treat and rehabilitate those affected, which requires a comprehensive approach to the person affected by coronavirus.⁽¹²⁾

The pandemic caused by Covid-19 has affected the food system in different parts of the world, since movements have been interrupted by the various restrictions that have occurred, which is detrimental and affects the supply chain of food and inputs for the production of those, which is why the population should always be prepared and lead a healthy lifestyle.⁽¹³⁾

The Latin American Alliance for Global Health (ALASAG),⁽¹⁴⁾ after several investigations and conclusions state that there is a great need to anticipate and strengthen research and the development of vaccines and drugs to fight Covid-19.

Breastfeeding and the breastfeeding period is not only centered on the baby, but also on the mother, and to do this, she requires support from family, friends or health care professionals, and currently, not having any type of support, they choose to look for it on Internet pages that provide information on proper breastfeeding techniques and how long they should breastfeed.⁽¹⁵⁾

Physiologically, this is a complex process that requires nutritional, microbiological, immunological and psychological adjustments for both the mother and the infant. There are different types of weaning, among them is natural weaning, a process that is established progressively over a long period of time in which the infant begins to try new foods, but without completely abandoning the mother's breast. There is also early weaning, which refers to weaning when the mother's breast is withdrawn before two years of age or when foods are introduced into the child's diet before 6 months of age. Finally, there is forced weaning, which occurs when the mother of the infant imposes weaning, either for various social or medical reasons or at any time during breastfeeding. It should be noted that if there is no extreme medical indication, health care personnel should always advise respectful or progressive weaning, since otherwise this can cause various problems for the infant and his/her mother.⁽¹⁶⁾

In the absence of a correct and complete education for mothers by healthcare authorities, forced or premature weaning can occur, except for the special situations mentioned above, and on other occasions the factors that influence are the age of the mother, socioeconomic level, among others. According to different studies,⁽¹⁷⁾ that have been carried out, the main reasons for abandoning breastfeeding were due to "mother's own decision" and the mother's perception that the child was "hungry".

In the literature ⁽¹⁸⁾ it is highlighted that the most common reasons that lead mothers to wean were "because it is already the age to stop" "because there is no more milk", "for vanity", "it is better to give milk only until the child is one year old", which reveals the lack of information they have on the subject. Thus, weaning is a process that should be carried out with as much affection as possible, in a progressive manner and eliminating each feeding little by little, replacing it with another type of food or activity.⁽¹⁹⁾

Covid-19 and breastfeeding

According to studies,⁽²⁰⁾ conducted so far, the virus is not transmitted through breast milk, so it is necessary to promote prevention measures by the proximity of the mother when breastfeeding and it is very important to provide support to pregnant women who are positive to Covid-19 on the care and safe feeding when providing infants. If the mother is very affected by Covid-19 and does not feel able to breastfeed, the mother has several options, among them: express milk from her best to continue feeding the infant, re-breastfeeding, all in order to provide all the essential nutrients for the proper growth and development of the newborn, and if the mother is infected, she should be guided to follow all the measures established by the healthcare authority in order to reduce the risk of transmission of the virus through respiratory droplets while in contact with the infant.⁽²¹⁾

The diet of the mother plays a basic role in the development and growth of the child, even more so in times of pandemic. In a study,⁽²²⁾ on the prioritization of the type of food in times of pandemic, it was found that 80% of the people indicated that legumes, fruits, vegetables, eggs and water should not be lacking in the home; 60% indicated that they had been worried about not having enough food to eat; over 75 % of the families indicated that they shop at fruit stores, greengrocers or free fairs; and finally, 70 % are concerned about the "High in..." warning labels before choosing food, so this study demonstrates the importance of healthy eating in times of Covid-19 in the family. In addition, important feedback information is available to develop the emergency plans provided by the government regarding the family shopping baskets that are delivered to the population, so that they contain food without seals in order to promote healthy eating in these times.

Quarantine is a significant factor that influences the mothers' diet, since it makes them consume a greater amount of carbohydrates, proteins and lipids, and because of boredom they are forced to consume a greater amount of food. Stress is another factor that can affect mothers' nutrition, given the increased time associated with confinement and the lack of sleep. All of the above causes deficiencies of essential macro and micronutrients that the mother must consume in order to transmit them to the child.⁽²³⁾ Adequate and constant support must be provided to the mother, both during prenatal and postnatal periods, including breastfeeding and nutrition counseling, measurement of upper arm circumference, weight gain, initiation of supplementation of deficient micronutrients, as well as control alternatives for women with suspected or confirmed mild Covid-19 positive episodes that do not require hospitalization.

It is also important that there is good communication between mothers and the different healthcare services, because in addition to attending to the health area, they should also cover the social area, making the respective referrals and, in terms of maternal and child nutrition, consider the social transfer programs and platforms to ensure that nutrition has better results for mothers and children.⁽²⁴⁾ Adequate and continuing instruction to the staff, monitoring strategies, the Code of Marketing of Breast Milk Substitutes, the establishment of breastfeeding centers in hospitals and the maintenance of a high coverage of healthy child control are some of the interventions that are carried out to promote breastfeeding among the various users.⁽²⁵⁾

Considering that the benefits of breastfeeding are multiple and important, among them the protection against possible infections. In addition, as previously mentioned, there is little evidence on the transmission of the virus through breast milk, it is suggested to maintain breastfeeding, either directly or indirectly, it should be noted that this recommendation may change as new studies emerge and prove otherwise ⁽²⁶⁾. In this regard, as it was mentioned, none of the few studies conducted;⁽²⁷⁾ in breast milk samples have been positive for the presence of Covid-19 in women who present this virus.

Systematization with existing theories

Currently, there is no evidence of the presence of Covid-19 in breast milk; different investigation to determine the presence of SARS-CoV-2 in milk have been performed using RT-PCR and the results have always been negative.⁽²⁸⁾ The presence of Covid-19 has not been detected in the milk of any mother confirmed with this virus or with suspicion of it, so there is a low probability that this virus is transmitted through breastfeeding, which is why it is recommended to continue breastfeeding, but with proper hygiene precautions including: use of a facemask, hand washing, alcohol-based hand sanitizer, among others.⁽²⁹⁾

It is important to emphasize that in the few cases of children with positive Covid-19 fed by other sources than breastfeeding, the virus has presented asymptotically or have presented symptoms that are not serious, since in general the children present a low risk of infection.⁽³⁰⁾

In a study,⁽³¹⁾ to determine intrauterine infection, 9 mothers (+) were tested for Covid-19, who had a cesarean delivery and who were tested for samples and breast milk after breastfeeding for the first time, although in 3 patients it was not possible to obtain breast milk samples, but the other 6 samples obtained were negative for the virus. Therefore, the study conducted in this small group did not determine evidence of intrauterine infection caused by vertical transmission in women who develop Covid-19 pneumonia at the end of pregnancy.

Also, a study,⁽³²⁾ was conducted on the vertical transmission of Covid-19 from the pregnant woman to the infant before and after birth through umbilical cord blood, through delivery or through breastfeeding in Covid-19 positive pregnant women, all these studies reported an absence of vertical transmission of Covid from mother to neonate, since there is an absence of SARS-CoV-2 in samples of breast milk, amniotic fluid and umbilical cord blood from newborns of mothers with Covid-19.

A descriptive study,⁽³¹⁾ in which 86 pregnant women with Covid-19 confirmed by RT-PCR in seven countries were considered, breastfeeding was authorized in only 24 % of the mothers; in 13 % milk was expressed and in 63 % the newborn was fed with milk formula.

Another study,⁽³⁰⁾ on attachment in clinical practice during Covid-19 pandemic defines that, even when living in times of pandemic, breastfeeding should be continued so that there is an effective connection between both, since breast milk is what provides passive immunity to the child and strengthens the communication and security transmitted by the mother to the child.

CONCLUSIONS

Finally, after the different reviews and studies carried out, it is concluded that Covid-19 is a new disease of lower incidence and less abrupt symptoms in pediatric ages. According to the different evidences reviewed, there is currently no presence of Covid-19 in breast milk, different studies have been carried out in different mothers and the results have always been negative regarding the presence of this virus, so it is still recommended to continue breastfeeding until the infant requires it and the mother does not have any kind of inconvenience and for those mothers who are Covid-19 positive or who are suspected of having the virus, the recommendation is to continue breastfeeding, especially for the nutrients and the benefits it provides, highlighting the large number of risks to which both infants and mothers are exposed when infants are not properly fed; as well as the consequences for the mother who does not perform this activity.

This is why it is extremely important to keep breastfeeding women informed about a topic that, being new, is being updated day by day and, consequently, the safety and prevention measures currently focused on the established sanitary standards, and in order to improve the quality of life during the pandemic that is being experienced.

Breastfeeding in times of Covid-19 is a topic in constant development, as it requires having for certain the non-transmission of the virus through breastfeeding. Thus, it is important to continue new studies to complement the available information and to correct the results if it is necessary, it is significant to highlight this is up-to-the-minute evidence, but in case the contrary would be demonstrated in the future; all the recommendations mentioned will be modified according to what the new results produce.

Conflict of Interest

The authors declare there is No conflict of interests

Authorship contribution

JIP, CBG y JTM: conceptualization, research, project management, supervision, visualization, writing - original draft, writing - review and editing.

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