



Original Article

Breastfeeding Practices during Covid-19

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ABSTRACT

The covid-19 has disrupted all parts of life especially maternal-child relationship. Many lactating women were quarantined in covid-19 which has affected nourishment of their infant. Breastfeeding has innumerable benefits for both mother and infants as it provides them protection. The Maternal-child relationship is drastically affected if an infant is separated from its mother. It greatly affects lactation, which acts as a shield against infectious diseases. It is approved by all the international agencies and government bodies to promote breastfeeding including the neonates of infected mothers. It is suggested to adopt proper hand and respiratory hygiene measures to prevent transmission from mother to infant. Although many studies and literature reviews have confirmed that there are no direct transmission cases related to coronavirus during breastfeeding. However, WHO, UNICEF, and many other organizations suggested to adopt some hygiene-specific guidelines while practicing lactation. These include wearing a mask, washing hands, and disinfecting surfaces. As we are in the middle of this pandemic and new information is being gathered by scientists, it is hoped that they will also support promoting breastfeeding. As its advantages outweigh the risks of COVID-19. The main aim of this review is to promote early initiation and exclusive breastfeeding during COVID-19.

INTRODUCTION

The most recent global emergency had spread through a virus is called COVID-19. Havoc on the world's economy and health had been caused by its quick and fatal spread. The causative agent is an acute respiratory syndrome that is easily contracted and at a very high rate of fatality [1]. Pneumonia can also get developed in the infected patient. Organ failure can also happen [2-4]. In December 2019 coronavirus wave was initiated as pneumonia of unknown cause in Wuhan, China [5]. Coronavirus outbreak declared as the sixth PHEIC by WHO on 30 Jan 2020. Coronavirus was declared as a pandemic on 11 March 2020 by WHO. This infectious disease (coronavirus) can spread by direct and indirect contact with them. Corona Virus can be carried by patients with or without symptoms. Respiratory droplets of

infected people can cause or transfer Corona Virus to a healthy person as it is highly contagious. Avoid direct contact with the eyes, nose, or mouth. You should also avoid touching a diseased person and/or infected surfaces or objects. The most preventive measure is to practice hand hygiene. Avoid touch with people outside the house as they might be carrying the virus with them i.e., on clothes, hands, or utensils they carrying with them [5]. In infected persons, there is a link between the immune patterns and the development of the disease. According to new researches, peripheral T cell subsets are depleting which is a hallmark of those with the severe acute respiratory syndrome. But when the recovered patients were evaluated, peripheral T cell subsets were quickly restored.

It is a good indicator of severe acute respiratory syndrome [6]. Another study found that during SARS, the immune system was impaired, revealing a similar effect [1]. The association between immune responses and viral spread is quite helpful in developing biomarkers of disease development and its therapy [6].

Incidence of COVID transmission from mother to child

Currently, WHO and UNICEF, the most important international organizations, encourage mothers to breastfeed their infants so they would receive antibodies, which is vital in protecting children against different diseases, only if contact is done under required preventive actions. At present, there is not much evidence available to support the idea that breastmilk can be a source of contamination spread. The studies are limited; they do not support the hypothesis of breastmilk containing the virus in itself [7].

Transmission mechanism

A scientific summary from the World Health Organization (WHO) in February 2021 describes three ways in which a virus can be transmitted from mother to child or newborn [8]. During pregnancy, in the mother's womb, the virus can pass from the placenta from the mother's bloodstream to the tissues of the fetus. During childbirth, contamination with the mother's blood, feces, or vaginal discharge may spread the virus. Postpartum infection may occur through breast milk or by direct transmission to an infected person or contaminant [8]. Chain research of 22 cases about infection spread among mothers with infection and their babies were done for 1.8 months of duration from 14 March to 14 April 2020 [7]. Among twenty-two moms, 20 (90.9%) chose to breastfeed their infants for the duration of hospital admission. 54.5% get initiation well-timed and 59.1% accomplish skin-to-skin touch at the delivery room. After 1 month, 82% of mothers with infection fed their newborns with breastmilk. After 1.8 months, it was reduced to 77%. Transitory complementary feeding was required by six out of twenty-two infected mothers (37.5%) until any other kind of breastfeeding practice was applicable. Throughout the follow-up duration, there have been no foremost complaints, no babies have been affected [7].

Breastfeeding practices during Covid-19 pandemic

Lactation provides protection for infants as well as mothers. The advantages of lactation are undoubted. Two things need attention to endorse and plan breastfeeding during Covid-19 [9].

- 1) The clinical features of COVID-19 as it is linked to lactation.
- 2) The defensive traits of lactating involve skin to skin care.

According to recent attestation, coronavirus cannot be spread through breastmilk. The benefits of lactation reduce the possible dangers during pandemics. It can also protect the infant and mother. To further ensure safety

follow the generation infection control measures strictly [9]. As reported by a study by researchers at the University of Rochester Medical Center (URMC) specifies that lactating women with COVID-19 do not transfer the SARS-CoV-2 virus by their milk. They contain milk-borne antibodies that are capable of neutralizing the virus. Another study suggested no transmission of the SARS-CoV-2 virus from mother to infant during lactation. This virus was found in blood and stool samples but was negative in the samples of mother milk [10]. No clear affirmation to date has confirmed the transmission of SARS-CoV-2 virus during the perinatal period by breast milk to newborns from mothers with confirmed COVID-19. Most of the studies failed to find SARS-CoV-2 RNA in human milk. In the case of literature, SARS-CoV-2 has been detected in breastmilk only in very few cases [10].

Properties of lactation and breastmilk

Lactation shields infants from morbidity and mortality [11,12]. This shielding property is powerful against communicable diseases. This is because of the direct transmission of anti-infective factors and antibodies. Moreover, it also ensures and long-term transmission of memory and immunological capability [13]. It is necessary to make efforts to ensure exclusive breastfeeding to get maximum benefits. Early initiation of breastfeeding along with exclusive breastfeeding reduces infant mortality [11]. Lactation decreases 74% in the severity of RSV (Respiratory syncytial (sin-SISH-Uhl) virus and its hospitalization with 72%, [12]. This data explains the protective role of lactation, which is applied to the COVID-19 pandemic as well [9]. Mother milk is an ample source of cytokines, lactoferrin, immunoglobulins, and lysozyme. They play a significant part in captivating and devouring harmful micro-organisms. They target particular bacteria and provide defense by modulating the immune reaction [14]. Infants are at the highest risk of getting infections due to their immature immune systems. Colostrum in breastmilk is an immune booster that safeguards newborns from infections. It is done by the secretory IgA antibodies and bioactive factors. The oligosaccharides that are substantial in human milk, provide probiotics, shape the microbiome, display neutralizing effects for bacterial antigens and regulate the developing immune system [15-17]. These all-motivating reasons emphasize the importance of breast milk for an infant.

Suggested practice guidelines

According to WHO, general disease prevention procedures should be adopted in all circumstances. Some of the evidence-based guidelines related to the management of COVID-19 have been issued. These include disease prevention and constraint of pandemic- and epidemic-prone acute respiratory diseases, moreover the up-to-date

data on COVID-19 [18]. International agencies and government bodies around the world approve to promote breastfeeding even born to COVID-19 infected mothers. Moreover, they advise practicing respiratory and hand hygiene measures to avoid transmission to an infant via respiratory droplets. Most of the authorities suggest that the newborn should be kept 2m from the mother. They should be separated by a barrier like a translucent curtain or in isolation. They should be under the care of the unaffected member[9].

- Measures should be adopted for expressing breastmilk as in normal conditions
- Equipment should not be shared among the mothers.
- It is necessary to rinse all the equipment's that are used to express milk with cold water first.
- Secondly, wash them with warm water
- Finally, sterilize all the equipment thoroughly.
- In a pandemic, it is advised to sterilize equipment after each use instead of after 24hr [14].
- If a mother is tested positive for or possibly exposed to COVID, she can use a breast pump.
- The mother should also express in an isolated area.
- She should then use a clean container to decant the expressed milk.
- The container should be held by a healthy person with protective clothing also wearing masks and gloves. This ensures that the virus cannot spread by the surface of the container.
- It can then also be stored for future use without the danger of contamination [19].
- Bottles should be cleaned with a dilution of 1:10 diluted sodium hypochlorite [NaOCl] or a viricidal agent as advised by Marinelli and Lawrence [20].

Lactation guidelines during COVID-19 by UNICEF

Although coronavirus cannot be transmitted by breastmilk but mothers will remain concerned regarding the transmission of coronavirus by breastmilk, and ways to keep themselves and their baby safe. These are a few tips to keep mothers and babies protected during the COVID-19 emergency [21].

1. Taking care of hygiene while breastfeeding:

Undoubtedly the virus has not been found in mother's milk. Therefore, all mothers are counseled to continue lactation. But they should adopt good hygiene practices during feeding. Mother should consider these 3 W's while lactation,

1. Wear a mask during feeding,
2. Wash hands with soap before and after touching the baby,
3. Wipe and disinfect surfaces regularly [21].

The infant could catch the virus during close interaction with the mother or any other infected person in the family. Extra care should be adopted if there is an infected person in the house by practicing above mentioned guidelines [21]. Some mothers take extra measures in routine by wearing a mask during lactation to keep their baby safe. If there is a doubt that a mother might have contracted coronavirus, she can express her milk. Then she can feed her baby with a spoon or a bottle [21].

2. Additional hygiene practices while breastfeeding if the mother falls sick:

If a mother gets coronavirus before or after giving birth, she can continue breastfeeding. The immune factors like antibodies present in breastmilk protect the baby and boost its immune responses. Therefore, lactation is by far the best way to fight against coronavirus.

Immediate medical care is suggested if a mother exhibit symptom of cough, fever, or difficulty breathing. The mother should follow guidelines given by a health care provider [21].

3. Feed with expressed milk, if too sick to breastfeed:

If a mother is too ill to continue lactation, they should get instant medical advice. She can use expressed milk to feed her baby or ask a non-infected person to feed the baby with the help of a clean cup and spoon. Separation during a pandemic is suggested only if the mother cannot take care of her infant because of COVID. In these circumstances cases, it is advised to use expressed milk with the help of a breast pump. It is proposed to use breast and pump hygiene, along with droplets precautions. Donor milk is also a safer substitute. Mothers are advised to continue breastfeeding after recovery [21].

4. Ensuring extra care while formula feeding:

Lactation is the best way of giving ideal food for the proper growth and nourishment of infants. But there are some conditions in which a mother is unable to breastfeed or sometimes she decides not to continue breastfeeding. Moreover, the widespread advertisement of formula milk challenges the self-assurance of many mothers. It inspires them to feed using bottles and formula milk. In such circumstances, it is important to ensure that the directions on the packaging are being followed while feeding an infant. Extra care should be taken while washing teats, bottles, and any other equipment used [21].

Category	Suggested guidelines
Infant	Separation of mother and infant should be avoided as it will effect on bonding and feeding [9].
Infant of mother with suspected COVID-19	Follow protocols for controlling infection while continuing breastfeed [22,23].
Infant of mother who test positive for COVID-19	Continue breastfeeding following the protocols [9].

Positive mother with severe symptoms (can breastfeed)	Temporary separation may be needed in case of mothers who need medical care in hospital -continue to express milk, however, not necessarily to discontinuation of breastfeeding
Infant of mother who test positive for COVID-19 (mother too ill to breastfeed)	Expressed milk should be feed to infant through spoon by a healthy person [24].
Expressing breastmilk:	Follow preventive measures to control infection, sterile all equipment used during expressing milk [25].

Table 1: Suggested breastfeeding guidelines during COVID-19

A mother's separation from her infant can have a drastic effect on the maternal-child relationship. It can disturb lactation, the significance of which is undeniable. Current guidelines suggested breastfeeding newborns born to women infected with COVID-19[26].

CONCLUSIONS

The covid-19 outbreak has been a worldwide emergency, since 2019, and with each of its new variants, the health concerns are also increasing. The main concern arises when we talk about the health of vulnerable groups like mothers and infants, and whether a mother should breastfeed her neonate or not. But after the results from research conducted by WHO, where out of 22 case researches, there were 90.9% of mothers wanted to breastfeed their infants and after 1.8 months of breastfeeding with proper guidelines followed, there were no such cases of viral transmission from infected mothers to infants. It is a sigh of relief because it is confirmed that it is safe for both even in these pandemic conditions if all mentioned breastfeeding guidelines are followed.

Conflicts of Interest

The authors declare no conflict of interest.

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