

Breastfeeding in the Novel Coronavirus Disease 2019 (COVID-19) Confirmed Cases of Women

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Abstract

The WHO has declared the outbreak of novel coronavirus disease 2019 (COVID-19). The swift worldwide spread of COVID-19 has caused in a global pandemic. The proportion of COVID-19 infected breastfeeding women is increasing worldwide. The COVID-19 pandemic has stressed the entire community, predominantly breastfeeding women, and the whole health professionals. The breastfeeding women highly affected during this pandemic because of they are also tensioned for their neonates. To overcome this hostile pandemic, the global healthcare service should be updated and modified accordingly. There is a growing requirement for evidence regarding maternal and neonatal consequences during this pandemic. Therefore, the present review article is aimed to investigate the available evidence on breastfeeding in confirmed cases of COVID-19 women to support a practically reasonable approach in handling these critical conditions. It has addressed the key points for all healthcare providers, stakeholders, health policy makers and implementers, and breastfeeding populations as the whole. The present review found that the possibility of COVID-19 virus detection in breast/human milk is currently a big controversial topic globally. This is due to that there is a discrepancy of evidences found worldwide. Some of the studies reported as the were no detection of COVID-19 virus within the breast/human milk while the other studies reported that as there was the detection of COVID-19 virus within the breast/human milk. However, there is no concrete evidence for the detection of COVID-19 virus within the breast/human milk. So, due to the inadequate clinical evidences, all healthcare providers should constantly update themselves and be alert about the transmissions of COVID-19 through breast milk.

Keywords: COVID-19; SARS-CoV-2; Novel coronavirus; Breast feeding; Pandemic

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Introduction

The outbreak of COVID-19 was originated from Wuhan, China [1-5]. The COVID-19 pandemic leftovers a worldwide encounter [3]. COVID-19 is an exceedingly contagious disease and the WHO has stated the continuing outbreak to be a worldwide community health emergency [6]. It has brought a shock encounters that could change the way the communities prioritize their health issues [7]. The spread of this pandemic has formed a several of difficulties for the public to fight with [8]. The pandemic has the potential to devastatingly impacts the development of children's by increasing the poverty, loss of caregivers, augmented stress, and declined health care [9].

The present pandemic has leads to a massive stress on subjects, health professionals, and healthcare systems [10]. The COVID-19 is a critical community health crisis for susceptible populations

and communities in which healthcare workers are insufficiently ready to manage the infection in particular [11]. Quarantining, closing of schools, and social isolation have changed a routine life to control the disease as a responses for this pandemic [12]. Even though, a management of individuals with a critical COVID-19 status is substantial in reducing the mortality, however the actually crucial measures comprise prevention, monitoring and timely intervention [13]. WHO and several governments have announced the stay-at-home order to decline the spread of this pandemic [14].

Breast milk

Initially, breast milk is defined as a peculiar fluid having unique characteristics and offers an ideal food during early neonatal period. It can improve the outcome of both neonate and lactating mother, affecting their entire life. Breast milk is characterized by

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several beneficial components among which a great role is played by breast milk own and specific microbiome [15]. Breastmilk is the gold standard for infant feeding [16,17]. The WHO describes that breastfeeding is one of the most effective ways to ensure child health and survival. It is safe, clean and contains antibodies which support protection against several common childhood illnesses. Besides, breastmilk offers all the energy and nutrients that the infant needs for the first months of life, and it continues to give half or more of a child's nutritional requirements during the second half of the first year, and up to one third during the second year of life. Breastfeed children found to perform better on intelligence tests, are less probable to be overweight and less prone to diabetes later. Women who breastfeed also have a decreased risk of breast and ovarian cancers [17]. Since the Breast milk contains antibodies which support to protect children against several common childhood illnesses, efforts should be made to appropriately advise and aid mothers with breastfeeding, even in instances when the mother has confirmed or suspected COVID-19 infection [18]. Breastfeeding is a healthy behavior with several short- and long-term benefits for both mother and infant [18,19]. Breastfeeding protects newborns from getting sick and also aids protect them throughout their infancy and childhood. It is principally effective against infectious diseases because it enhances the immune system by directly transferring antibodies from the mother [20].

Detection of COVID-19 in breast milk

The current investigations have found no evidence of SARS-CoV-2 in human breastmilk [21-25]. The great deal to learn about the behavior of COVID-19 virus and mother to infant transmission remains highly concerned. During separating infants and mothers, it needs to consider not just the risks of the virus, but also the risks to breastfeeding [26]. The presence of SARS-CoV-2 has not been documented in human milk [21]. However, the benefits of breastfeeding are compromised during maternal COVID-19 infection because of the lack of rigorous evidence as to whether SARS-CoV-2 can be transmitted through breastfeeding or not, and due to lack of confidence for safety and practices during breastfeeding [16].

However, the gap was observed between the currently existing studies which made the scholars more confusion. Some studies have reported that there were the detection of COVID-19 virus in the breast/human milk [22,27,28]. For instances; a study which included 18 women who had confirmed SARS-CoV-2 infection reported that One breast milk sample had detectable SARS-CoV-2 RNA [27]. The other study which has examined milk from two nursing mothers infected with SARS-CoV-2 were stated that SARS-CoV-2 RNA was detected in milk from one of the two mothers [22]. Furthermore, a systematic review findings showed that 4 breast milk samples from 92 cases showed evidence of SARS-CoV-2 [28].

Breastfeeding in confirmed cases of COVID-19 women

The study showed that breastfeeding in newborns of mothers with COVID-19 is safe with correct infection and control measures to reduce the risk of infection by droplets and by contact with

the respiratory secretions between mother and infant. When mother-baby child separation happens, supplementing feeding with pasteurized donor human milk or infant formula may be effective until breastfeeding is resumed [29]. But all confirmed or suspected COVID-19 cases, mothers with any symptoms who are breastfeeding or practicing skin-to-skin contact should take precautions [20]. All maternal decisions in relation to breastfeeding are reasonable, since the infection by Covid-19 is still poorly recognized. However, puerperal women and their families must be very well informed to make a conscious choice based on the information available [30]. The mother is expected to produce sufficient neutralizing antibodies without developing serious conditions due to immune response to SARS-CoV-2 infection. Where as, these passive antibodies may have a protective effect on the infants via breastfeeding [31].

The earlier study done in in March was suggested that infected or suspected mothers should refrain from breastfeeding until they have fully recovered or have been confirmed negative for COVID-19. Besides, mothers and newborns are to be isolated separately to avoid the transmission to the baby until the mother has fully recovered or has been confirmed as a negative [32]. The COVID-19 pandemic put a threat to all infants because the interventions to protect them from infection may separate them from their mothers, with all the associated problems, and prevent or impede breastfeeding or receiving their mother's milk however the threat is not just because they could become infected with SARS-CoV-2 [33].

Recommendations

Since there is lack of evidence for SARS-CoV-2 transmission through breast milk, breast-feeding counselling along with suitable preventive measure should be offered to all pregnant women [34]. If the mother is breastfeeding and have symptoms of or confirmed COVID-19, she should have to take steps such as washing her hands before touching your baby, wearing a cloth face covering, if likely, while feeding at the breast, and washing her hands before touching pump or bottle parts and clean all parts after each use to prevent the spread of the virus to her baby [35]. But, if a mother with COVID-19 is too sick to care for the newborn, the neonate should be managed separately and fed fresh expressed breast milk with no need to pasteurize it because the human milk is not supposed to be a vehicle of COVID-19 [25].

During breastfeeding the WHO also suggests that to practice respiratory hygiene, comprising during feeding, use a medical mask when near your child if you have respiratory symptoms such as being short of breath, wash your hands thoroughly with soap or sanitizer before and after contact with your child, routinely clean and disinfect any surfaces you touch. But if she is severely ill with COVID-19 or suffers from other complications that prevent her from caring for her infant or continuing direct breastfeeding, she could express milk to safely deliver breastmilk to your infant. If you are too unwell to breastfeed or express breastmilk, you should discover the possibility of relactation, wet nursing, or using donor human milk. But the approach which they will use depends on factors like cultural context, acceptability to you, and service availability [20].

Further, the guidelines of the Federation of Obstetric and Gynecological Societies of India (FOGSI), National Neonatology Forum of India (NNF), and Indian Academy of Pediatrics (IAP) recommends that mothers should perform hand hygiene frequently, including before and after breastfeeding and touching the baby, should practice respiratory hygiene and wear a mask while breastfeeding and providing other care to the baby and they should routinely clean and disinfect the surfaces [36].

The report of a different case report study showed that breastfeeding by a positive mother for COVID-19 has no role in transmission for this virus [37,38]. The study done among (60) pregnant women diagnosed with COVID-19 showed that all infants born to these mothers were not infected with COVID-19 during breastfeeding [37]. In the other case report study a maternal woman was positive for SARS-CoV-2 tested in throat swabs but negative tested in other body fluids, and she had IgG and IgA detected in breast milk. But the infant was negative for SARS-CoV-2 virus at a birth and had an increased IgG in serum but quickly decayed. These findings suggest that breastfeeding might have the potential benefit to the neonates [38].

Finally, the WHO recommends that mothers with suspected or confirmed cases of COVID-19 should be promoted to start or continue to breastfeed. During this, the mothers should be counselled that the benefits of breastfeeding significantly outweigh the potential risks for transmission. In addition to this, mother and infant should be permitted to remain together while rooming-in throughout the day and night and to practice skin-to-skin contact, comprising a kangaroo mother care, particularly immediately after birth and during the establishment of breastfeeding, whether they or their infants have suspected or confirmed COVID-19 cases [39]. The breastfeeding should be promoted and encouraged in mothers with suspected or confirmed COVID-19 infection whenever possible, but without disregarding the option of mother's milk expression [40]. Also, the organizations and governments must develop guidance with a full appreciation of the benefits and significance of the development of the early mother-child relationship, and of

breastfeeding, in achieving good health and developmental outcomes for infants [33].

Conclusions

The swift worldwide spread of COVID-19 has caused in a global pandemic. It remains a global challenge. Currently, it is a main and dangerous global health emergency. The present review found that the possibility of COVID-19 virus detection in breast/human milk is currently a big controversial topic globally. This is due to that there is a discrepancy of evidences found worldwide. Some of the studies reported as the were no detection of COVID-19 virus within the breast/human milk while the other studies reported that as there was the detection of COVID-19 virus within the breast/human milk. However, there is no concrete evidence for the detection of COVID-19 virus within the breast/human milk.

Overall, taking the several benefits of breastfeeding for mother and baby under consideration, the available evidence suggested that breast milk has the insignificant role in the transmission of COVID-19 to the baby. So that, the recent evidences including the update from WHO, they recommend that mothers with suspected or confirmed cases of COVID-19 should be promoted to start or continue to breastfeed. Finally, the present review suggests that further study is needed to understand the role of breast milk in transmission and protection against COVID-19.

Author's Contributions

The author made a significant contribution to conception and design, acquisition of data, or analysis and interpretation of data; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; and agree to be accountable for all aspects of the work.

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The author declares no conflicts of interest in this work.

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