Breastfeeding and COVID-19 in Malaysia: Weighing the Risks and Benefits.

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INTRODUCTION

Breastmilk is known to be the best source of nutrition for infants. Malaysia adopts the policy by the World Health Organization (WHO) which recommends exclusive breastfeeding for the first six months followed by a combination of nutritious complementary foods and to continue breastfeeding for two years or beyond.[1] Numerous effort has been done to support, promote, and protect breastfeeding at all levels of implementation to increase the rate of breastfeeding.

The novel coronavirus disease, also known as COVID-19 that emerged at the end of 2019 was declared a global pandemic by the WHO on March 11, 2020.[2] This pandemic has imposed a significant effect on the world's population. Person to person transfer via close contact with an infected person and exposed to coughing, sneezing and respiratory droplets has been confirmed by cases worldwide.[3] Globally, many countries have imposed lockdown measures in an effort of reducing the transmission of this new disease. Similarly, Malaysia has entered the fourth phase of the Movement Control Order (MCO) which started on 18th March 2020.

Fear of transmission of COVID-19 from mother to infant while breastfeeding may lead to a reduction in this practice despite its known benefits. In this pandemic, the main priority is public health interventions in controlling the outbreak. New guidelines are needed in this specific group of population in minimising the spread of this disease. Thus, this article aims to weigh the risk and benefit of breastfeeding practice during the COVID-19 pandemic by comparing relevant pieces of evidence.

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Benefits of breastfeeding and breast milk content

Breastfeeding is good for both mother and infant. There is no doubt about the significant advantages of breastfeeding on health, society, and family economics. Other than giving the ideal nutrition to the infant, the main advantage of breastfeeding is in providing immune protection and prevent various diseases in the perinatal period. Human breast milk contains numerous protective factors against infectious disease and may influence immune system development.

The main protective factor in breast milk is secretory immunoglobulin A (IgA) antibodies which are lacking in newborn infants but is present at very high concentration in the colostrum (10g/L) and in mature milk (1g/L).[4,5] When an antigenic material is breathed in or ingested by a mother, the secretory immune system responds rapidly via the entero-broncho-mammary link of IgA+ B lymphocytes and mucosal immune system. M cells of Peyer's patches in the gut-associated lymphoid tissue (GALT) or tracheobronchial tree mucosa (BALT) activates the entero-mammary or broncho-mammary pathway to provide effective protection to the infant by producing targeted secretory IgA in the breast milk.[5] This specific secretory IgA will bind to the pathogen and prevent infection. The transfer of this highly specific protection from a mother to her infant via breastfeeding provides additional support for the immature immune system of the infant.

The other major host defense factors in colostrum and breast milk are IgM, IgG, lactoferrin, lysozyme, complement proteins, bifidus factor, and cellular

components namely macrophages, T and B lymphocytes, and polymorphonuclear leukocytes (PMN).[4,5] Most of the protective components of human milk may work synergistically with each other or with factors related to the mucosal or systemic immune response thus transferring the immunocompetence from a mother to her infant.[5]

In promoting, supporting, and protecting breastfeeding, Baby-Friendly Hospital Initiative (BFHI) was initiated by WHO and UNICEF in 1991 with this purposes[6]. The established 10 steps of BFHI include immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth, breastfeeding on demand, and rooming-in.[6] With the current pandemic, these practices had to be relooked to reduce the transmission of COVID-19 between mother and infant.

Up to date, there is still a lot of unknowns about the virus. Currently, there is no evidence for intrauterine vertical transmission of COVID-19 from infected pregnant mothers to their foetuses.[7,8] Limited studies done on women with COVID-19 had so far not detected any virus in the breast milk thus suggesting that the virus could not be transmitted through breastfeeding or expressed breast milk.[8] In a small study in Wuhan China, researchers found no evidence of the virus in the breast milk, cord blood, or amniotic fluid in pregnant women with COVID-19.[8] Antibodies to SARS-COV-2 have been detected in breast milk samples, which gives reason to believe that breast milk might have a protective effect to the infant.[9,10] Nevertheless, a mother can transmit the virus to the infant through close contact while breastfeeding.

International guidelines on breastfeeding during COVID-19 pandemic

The current recommendations by WHO and CDC are for mothers to continue breastfeeding during this pandemic, regardless of whether they are suspected, probable or confirm the case of COVID-19. Breastfeeding should be initiated within one hour of birth with the skin-to-skin contact immediately after birth. Specific precautions to be taken to prevent transmission are respiratory hygiene, including during feeding by wearing a medical mask when near an infant especially if the mother is symptomatic, perform hand hygiene before and after contact with the infant, and routinely clean and disinfect surfaces with which the symptomatic mother has been in contact. If the mother is unwell or has any reasons to not be able to direct feed her infant, she should be supported to express her milk and safely provide the breast milk to her infant.[11,12]

In a mother who is too unwell to breastfeed or express breast milk, the viability of relactation, wet nursing, donor human milk, or appropriate breastmilk substitutes should be explored.[11] Infants born to these mothers should follow the standard feeding guidelines and steps written in the Baby-Friendly Hospital Initiative (BFHI) policy. Other international organizations namely the Academy of Breastfeeding Medicine (ABM), International Lactation Consultants Association (ILCA), and United Nation Children's Fund (UNICEF) concurs with these recommendations.[13-15]

Malaysia's current practice in managing COVID-19 and breastfeeding

However, in Malaysia, the guidelines by the Ministry of Health differs from the international guidelines. A mother under investigations or confirmed cases of COVID-19 are not recommended to breastfeed, and the neonate is separated and should not receive breastmilk until the maternal status has been confirmed to be negative of the disease.[16] Baby-friendly policies are also suspended for these patients during this time including skin-to-skin contact directly after birth which is important in the initiation of breastfeeding amidst the pandemic.[16]

Nevertheless, if the mother is still keen to breastfeed despite counselling, it should be documented clearly in the case notes that the mother is fully aware of the risks.[16] This consensus and guidelines, however, have raised concern to lactational activists and advocators where they proposed to change the practice and follow the current international guidelines.[17] Mothers and babies should not be separated and denied for breastfeeding since breastfeeding has many undoubtful benefits.

As large published studies emerged in China on the experiences of managing pregnancy and delivery, most of these positive COVID-19 pregnant mothers were delivered via Caesarean section, separated and did not breastfeed for a minimum of 14 days to halt

the transmission to their babies.[18] In the light of uncertainties and limited data on the transmission of COVID-19 to newborn babies via breastmilk, hence Malaysia's Ministry of Health has agreed not to allow such practice to control the burden of the disease to the country. As Malaysia is fighting to flatten the curve since March 2020, this control measure has somewhat helped to reduce the statistic of new cases.

Another worrying issue in the management of COVID-19 is the non-availability of an effective treatment. As to the date of this article written, there is so far no effective antiviral for the cure.[11] Many powerful and strong antiviral such as interferons (IFN), Lopinavir/Ritonavir, Arbidol, and Favipiravir have been used, recommended, and still in clinical trials since the SARS-COV-2 outbreak.[18] With these drugs, most of them are not lactation compatible with minimal data on its safety profile in breastfeeding mothers and might cause adverse reactions to the nursing babies.[19] Thus, it would be the utmost importance to protect the immature liver of the babies.

Breastfeeding and COVID-19 Risk Precautions

As mentioned earlier, most international organizations recommend that breastfeeding is to be continued, aiming to promote breastfeeding and neonatal bonding with special precautions practiced such as barrier measures like respiratory hygiene and the usage of expressed breast milk.[11-15] However, severe symptomatic mothers are to be isolated and prevented from breastfeeding.[20] Also, infants requiring neonatal care are also advised against breastfeeding.[21,22]

The main risk of breastfeeding is the intimate contact between the infant and the mother, where infective droplets are highly likely to be transmitted.[22] This is supported by a retrospective study in Italy where two newborns who were breastfed by their mother who was diagnosed with COVID-19 without wearing a mask, tested positive for SARS-COV-2.[23]

In dealing with such cases, the clinical condition of the mother and baby dyad is to be observed. If the mother is suspected or confirmed COVID-19 positive, yet both mother-infant are stable, they should be roomed-in together in an isolation room[15], hand-washing before and after touching or holding the infant for breastfeeding and paying attention to respiratory hygiene like wearing a mask during breastfeeding.[21,22] Ideally, it is recommended that the infant is situated in a bassinet six feet away from the mother and a healthy person cares for the infant.

If the mother is concerned about transmission to her infant, she can be supported with temporary separation until her results are back. In the meantime, lactation support in terms of expressing breastmilk should be initiated to boost and maintain her milk supply.[12-15] Strict regulations on handling feeding bottles including hand hygiene, sterilization, and expression of breastmilk must be adhered to reduce transmission.[22] The expressed breastmilk can be given by healthy caregivers while in the ward or at home. As the mother and infant are discharged from the hospital, lactational support from healthcare care providers and peer support groups via telehealth is important in ensuring that breastfeeding goes on well. The measures are the same for women who are suspected or who are symptomatic patient- under- investigation (PUI) who are self -quarantined at home.[14]

To date, the evidence of COVID-19 transmitted via breastmilk has been inconclusive. Studies from China reported that there is no evidence of transmission via breastmilk.[9] A recent scoping review is done by Elshafeey et al, found that of 26 newborns who were born by mothers with COVID-19 positive, all breast milk samples were tested negative for COVID-19.[24] Similarly, case reports from India and Italy had reported that newborn babies who were breastfed by their mother were tested negative for COVID-19.[23,25] Thus, given the detrimental effects of giving formula milk and jeopardized bonding between the two, most international guidelines recommend breastfeeding with precautions as mentioned above. The risks and benefits of infant feeding choices have to be discussed with parents and informed choices are to be made.

Preventive measures for pregnant women during Covid-19 pandemic

The COVID-19 outbreak has caused concerns to the medical fraternity that pregnant women are no more likely to contract the disease than the general population. As the number of people being infected

increases, infected pregnant women numbers are expected to rise ranging from mild to severe infections. Pregnant women with co-morbidities or significant heart disease are the ones considered the most vulnerable.[21-22]

Education on preventing the spread of disease, recognizing early symptoms, and ensuring good antenatal care is important during this time. Pregnant women must practice social distancing stringently and self-isolation if having symptoms. Avoidance of contact with people infected with COVID-19 or anyone exhibiting symptoms is advised. General precautions such as hand hygiene and good respiratory hygiene should be practice at all times.[21-22]

CONCLUSION

In conclusion, this commentary reflects the current recommendation worldwide on breastfeeding during this COVID-19 pandemic and the current practice in Malaysia.

As most international guidelines recommend continuation of breastfeeding and proximity care of mother and infant, Malaysian policy stands on postpartum separation and prohibiting breastfeeding as well as provision of expressed breastmilk in PUI or confirmed COVID-19 mothers. This policy is likely to continue to prevent the rising COVID-19 cases from overwhelming the country's healthcare system.

As the outbreak, data and information are changing rapidly, continuing to observe for updates is highly recommended. Putting up a sound guideline is rather challenging. With more robust data and evidence in the future, a more valid and justified guideline could be developed to protect breastfeeding while curbing the disease. As a result, the breastfeeding landscape in Malaysia during this pandemic may change and in line with most international guidelines.

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