News and Views

Management of Viral Gastroenteritis in Pediatric Population

Viral gastroenteritis is a frequently encountered diarrheal disorder in general practice and emergency departments. Leung AK and Hon KL provided a narrative updated review on the evaluation and management of viral gastroenteritis in children.

They included clinical trials, meta-analyses, randomized controlled trials, observational studies and reviews mentioning viral gastroenteritis in the pediatric population.

They found acute viral gastroenteritis to be usually self-limiting. But it can lead to dehydration and electrolyte imbalance if left untreated. Adequate fluids containing physiological concentrations of glucose and electrolytes are a must to compensate for gastrointestinal losses and cover maintenance needs. They also found Oral rehydration therapy to be as effective as intravenous (IV) fluid therapy for rehydration in children with mild-to-moderate dehydration. Serum electrolytes, creatinine and glucose studies should be done only in children with severe dehydration who require hospitalization and IV therapy. Using ondansetron wisely can increase the success rate of oral rehydration therapy and reduce the need for IV therapy and hospitalization.

They concluded by stating that acute viral gastroenteritis causes substantial morbidity in developed countries and significant mortality in developing countries. The importance of proper personal hygiene and handwashing to prevent fecal to oral transmission of the pathogen and the importance of rotavirus vaccine in the prevention of rotavirus gastroenteritis should be advocated by the physician to the caregivers.

The researchers also look forward to the development of an effective norovirus vaccine to further reduce the incidence of viral gastroenteritis.

Source: Drugs Context. 2021;10:2020-11-7.

The Usefulness of Microbiota-Directed Food Intervention for Undernourished Children

Chen RY et al mentioned that more than 30 million children globally suffer from moderate acute malnutrition. Limited effectiveness and unknown pathogenesis remain the prime challenges of the current treatments for this condition. Perturbed development of gut microbiota has been seen in children with moderate acute malnutrition.

The researchers carried out a study by supplying a microbiota-directed complementary food prototype (MDCF-2) or a ready-to-use supplementary food (RUSF) to 123 children with moderate acute malnutrition aged between 12 months and 18 months, which was given twice daily for 3 months, followed by 1 month of monitoring. They tracked weight-for-length, weight-for-age, and length-for-age z scores and mid–upper-arm circumference values at baseline and every 2 weeks during the intervention period and at 4 months, and then compared these phenotypes between baseline v/s 3 months and between baseline v/s 4 months. Levels of 4977 proteins in plasma and 209 bacterial taxa in fecal samples were also measured.

They found that-

The rates of change in the weight-for-length and weight-for-age z scores were consistent with a benefit of MDCF-2 on growth throughout the study, including the 1-month follow-up. They linked MDCF-2 administration to alteration in levels of 70 plasma proteins and of 21 associated bacterial taxa that were positively correlated with the weight-for-length z score. Those proteins contained mediators of bone growth and neurodevelopment. They concluded by saying that MDCF-2 is a good dietary supplement for young children with moderate acute malnutrition and provides insight into mechanisms by which this targeted manipulation of microbiota components may be linked to growth.

Source: N Engl J Med. 2021;384(16):1517-28.

Neonatal SARS-CoV-2 Infections in Breastfeeding Mothers

Shlomai NO et al conducted a study to assess infection rates predischarge and postdischarge in breast milk-fed newborns with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)–positive mothers who were separated postdelivery from their mothers and discharged from the hospital. They also evaluated breastfeeding rates predischarge and postdischarge. They separated the SARS-CoV-2 positive mothers from the newborns and screened newborns within 48 hours of delivery, followed by rescreening ≥14 days post-discharge.

They observed that-

All neonates tested negative for SARS-CoV-2 postdelivery.

- 74.5% of the neonates fed on unpasteurized expressed breast milk during the postpartum separation until discharge.
- 89% of the neonates got discharged from the hospital following mothers receiving instructions in anti-infection measures.
- 40% of the households reported additional SARS-CoV-2–positive residents.
- 85% of the newborns received breastfed post-discharge.
- All 60% of the newborns retested for SARS-CoV-2 postdischarge were reported negative.

Highlights-

- Unpasteurized breast milk from SARS-CoV-2 positive mother does not cause viral infection in newborn.
- Breastfeeding on SARS-CoV-2 positive mother does not cause viral infection in newborn.
- Breast milk from SARS-CoV-2 positive mother is safe for the newborn.

Source: Pediatrics. 2021;147(5):e2020010918.

Neurodevelopmental Outcomes in Children Born Extremely Preterm

Taylor GL et al conducted a study to assess the relationship between 2- and 10-year neurodevelopment utilizing a well-known 2-year definition and a 10-year definition developed by an expert panel.

They utilized the data from the Extremely Low Gestational Age Newborn Study cohort and classified 2-year neurodevelopmental impairment (NDI) using definitions developed by the Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network and classified 10-year NDI using definitions developed by an expert panel, which added epilepsy and ASD at 10 years.

They found that-

Children with moderate to severe NDI at 2 years-

- 63% showed none to mild NDI at 10 years

Children with profound NDI at 2 years-

- 36% showed none to mild NDI at 10 years.

Thus they concluded that NDI in infancy only weakly predicts NDI in middle childhood.

It brings a ray of hope for the parents at risk for delivery of an extremely preterm infant, that one-third of surviving children classified as having profound NDI and nearly two-thirds of those classified as having moderate to severe NDI at 2 years show none to mild NDI at 10 years.

Source: Pediatrics. 2021;147(5):e2020001040.

Emollient Therapy in Preterm and Low Birth Weight Neonates

In a randomized controlled trial, conducted in Mayo Hospital Lahore, from January till June 2018. Infants with birth weight between 1.5 and 2.5 Kgs or preterm neonates born between 28 and 37 completed weeks of gestation were included in the study.

Overall, 140 neonates with genetic syndrome, infection or with a history of admission in NICU due to any reason, were excluded. Neonates were randomly divided into two groups A and B. Mothers of neonates in group A were advised massage with sunflower oil; neonates in group B received massage without any emollient. Babies were closely followed up and their weight and length were measured at 2 months of age.

The findings showed that the mean increase in weight was 489.84 ± 297.48 grams among group A neonates and 373.43 ± 276.31 grams in group B neonates. While the mean increase in length was 6.5 ± 1.1 cm, in group A and 4.8 ± 1.3 cm in group-B.

It was inferred that massage with emollient therapy leads to significantly more increase in weight and length compared to massage alone, among preterm and low birth weight neonates. Hence, emollient therapy is an effective non-pharmacological intervention for increasing weight and length in low birth weight and preterm neonates.

Source: J Coll Physicians Surg Pak. 2021;31(3):298-301.

Cradle Cap

Cradle cap or pityriasis capitis, is a subset of infantile seborrheic dermatitis (ISD). It is a very common, mostly self-limiting, chronic noninflammatory scaling skin condition that presents between the third week and first couple months of life. It is most frequently reported in the first 3 months of life.

Skin manifestations include – erythematous plaques with greasy-appearing yellowish scale. It can be found

in areas dense in sebaceous gland activity, such as the scalp, T line of the face and external ears; the most frequent site is the crown of the head.

If the condition persists after 12 months of age, alternative diagnoses should be further investigated. Bacterial coinfection could be a possible, but rarely seen complication of cradle cap – usually precipitated on repeated scratching of the affected skin. Parents should be educated properly about the chronicity and the benign nature of this condition, as well the management strategies.

Source: In: StatPearls [Internet]. Treasure Island (FL); 2021 Jan.

An Organization-Wide Initiative to Implement Parent-Performed, Delayed Immersion Bathing

As per a study published in *Nursing for Women's Health* aimed to implement an organization-wide evidence-based practice change to parent-performed, delayed immersion newborn bathing across nine facilities at a military health care system.

This was organization-wide evidence-based practice initiative using pre-implementation and post-implementation data, conducted in the setting of a military health system. The study included term newborns (≥37 weeks gestation) born within nine facilities. Here, baths for newborns were delayed until 24 hours of age, unless otherwise requested.

Parents were instructed to tub bathe their newborn and encouraged to complete the bath in less than 5 minutes. The team reviewed 100 records from each hospital and compared pre- and postimplementation temperature data.

The results of the change showed a statistically significant association between time point (i.e., before vs. after implementation) and post-bathing hypothermia. In addition, data also indicated fewer hypothermic temperature readings from the onset of birth until 8 hours of life with the new bathing process. Although this difference was not statistically significant. In inference it was stated that newborns' first bath was associated with a significant decrease in the incidence of hypothermic temperature readings in this population, immediately after bath. The intervention involved minimal cost with multiple benefits.

Source: Nurs Womens Health. 2021;25(1):63-70.

A Stable Cutaneous Microbiome Exists from Birth

An article published in *Pediatric Research* discussed that the skin provides the first-line defense against environmental microbes and antigens. While the host skin microbiome renders competitive exclusion of potential pathogens, physiological characteristics, such as – release of sebum, sweat, and small antimicrobial compounds secreted by subcutaneous glands, also aid in eradicating certain pathogens.

The authors stated that majority of cutaneous microbes are bacteria; however, some sites may also have a relatively high content of resident fungi, collectively termed the microbiome. Disordered fungal colonization has been linked to various disorders such as dermatophytosis, atopic dermatitis and seborrheic dermatitis. Cutaneous fungi play important roles in host health, including colonization-resistance against pathogens and facilitating immune development and maintenance of the host.

This article reported that neonatal sepsis is often associated with organisms that colonize the skin of neonates. Furthermore, the microbiome is also said to play a crucial role in immune development during early life.

Source: Pediatr Res. 2020.;88(2):153-54.

Clinical Features and Outcomes of Neonatal Dengue at a Children's Hospital in Vietnam

The present retrospective study was carried out at the Children's Hospital 1, Ho Chi Minh, Vietnam, on 32 cases of laboratory-confirmed dengue in neonates.

The findings revealed that 25% cases were misdiagnosed with neonatal sepsis and 12.5% cases were misdiagnosed with neonatal immune thrombocytopenia, initially. The median time between the first day of the mother's onset of fever and childbirth was -1 days.

Patient's clinical manifestations included – petechiae in 87.5%; pharyngeal mucosal hemorrhage in 6.3%; and hepatomegaly in 75%. In the febrile phase, the mean white blood cell (WBC) counts were 7800 ± 800/mm^3 and platelets were 97,111 ± 37,826/mm^3. In the critical phase, the mean WBC counts were 13,400 ± 2800/mm^3, and platelets were 30,100 ± 5749/mm^3. Meanwhile, all mothers had laboratory-confirmed dengue by NS1 positive in the perinatal period.

It was concluded that early diagnosis of neonatal dengue should be based on a history of maternal illness, NS1 rapid test and clinical presentation such as petechiae, hepatomegaly and low platelet counts in the febrile phase.

Source: J Clin Virol. 2021;138:104758.

Efficacy of the Combined use of a Mild Foaming Cleanser and Moisturizer for the Care of Infant Skin

Despite the application of skin care treatments, many infants have skin problems, such as dryness and erythema.

The aim of a study published in *Clinical Cosmetic and Investigational Dermatology* proposed a new combination skin care for infants which consisted of a foaming cleanser with lower surfactant activity and moisturizers that contained pseudo-ceramide.

Overall, 50 infants (age: 3-24 months) with insignificant levels of dry skin were enrolled in this usage trial. The infants were first washed with the test cleanser while bathing and then applied the moisturizer (lotion or cream) containing pseudo-ceramide.

Prior to and following the 4 week usage period, visual evaluation of the skin condition was conducted by a dermatologist, in addition to instrumental analysis.

Erythema and papule, accompanied by dryness, were commonly observed at Week 0; by Week-4, these symptoms significantly improved. The condition of none of the subjects deteriorated. The number of infants with lower cutaneous barrier function and higher skin pH decreased. Parents of the infants recognized improvements in the skin symptoms and were appreciative of the test materials.

From the results, it was concluded that combined usage of the foaming cleanser with lower surfactant activity and a moisturizer containing pseudo-ceramide may be effective in maintaining healthy infant skin and ameliorating skin symptoms.

Source: Clin Cosmet Investig Dermatol. 2017;10:393-401.

Clinical Analysis of Neonates Born to Mothers With or Without COVID-19

The perinatal consequences of neonates born to severe acute respiratory syndrome-associated coronavirus-2 (SARS-CoV-2) infected mothers are uncertain.

A new study published in the *American Journal of Perinatology* compared the differences in clinical manifestation, laboratory results and outcomes of neonates born to mothers with or without coronavirus disease 2019 (COVID-19).

During this study, 48 neonates were admitted to Tongji Hospital and HuangShi Maternal and Child Healthcare Hospital from January 17 to March 4, 2020. The neonates were divided into three groups according to the mothers' conditions – neonates born to mothers with confirmed COVID-19; neonates born to mothers with clinically diagnosed COVID-19; and neonates born to mothers without COVID-19. The clinical data of mothers and infants in the three groups were collected, compared and analyzed.

The deliveries occurred in a negative pressure isolation room, and the neonates were separated from their mothers immediately after birth for further observation and treatment. It was noted that none of the neonates showed any signs of fever, cough, dyspnea or diarrhea. SARS-CoV-2 reverse transcriptase-polymerase chain reaction of the throat swab and feces samples from neonates in all three groups was negative. Additionally, no differences were detected in the whole blood cell, lymphocytes, platelet and liver and renal function among the three groups. All mothers and their infants showed satisfactory outcomes, including a 28-week preterm infant.

Hence, clinical manifestations, radiological and biochemical results did not show any difference between the three groups. No evidence of vertical transmission was found in this study whether the pregnant women developed coronavirus infection in the third (14 cases) or second trimester (1 case).

Source: American Journal of Perinatology. 2020 Sep 6.

Multisystem Inflammatory Syndrome in Children & Adolescents

Multisystem Inflammatory Syndrome in Children (MIS-C) is a new phenomenon reported worldwide with temporal association with COVID-19. A new study published in *Pediatric Respiratory Reviews* evaluated reported cases of MIS-C in children and adolescents.

This was a systematic review of clinical features and presentation from 1,726 papers – 35 documented papers related to MIS-C cases that identified 783 individual cases of MIS-C between March-June 2020. Among the patients, 55% were males at the median age of 8.6 years—age-range-3 months to 20 years.

The findings showed that patients with MIS-C had a high frequency of gastrointestinal symptoms (71%) – including abdominal pain in 34% and diarrhea in 27%. While cough and respiratory distress were reported in 4.5% and 9.6% cases, respectively. Blood parameters showed neutrophilia in 345/418 (83%) of cases and a high CRP in 587/626 (94%). Meanwhile, 362/619 (59%) cases were SARS-CoV-2 infection positive (serology or

PCR), but only 41% demonstrated pulmonary changes on chest imaging. However, the severity of illness was high with 68% cases requiring intensive care admission; 63% requiring inotropic support; 244/783 (28%) needing some form of respiratory support (138 mechanically ventilated); and 31 required extracorporeal membrane oxygenation. Treatment strategies included intravenous immunoglobulin (63%) and intravenous steroids (44%); 29 cases received Infliximab, 47 received interleukin (IL1) receptor antagonist and 47 received IL6-receptor antagonist. Unfortunately, 12/783 (1.5%) children died.

Therefore, a higher incidence of gastrointestinal symptoms were noted in MIS-C. In contrast to acute COVID-19 infection in children, MIS-C appears to be a condition of higher severity with 68% of cases having required critical care support.

Source: Pediatr Res Revi. 2020;S1526-0542(20)30117-2.

Lithium

A new article published in *Drugs and Lactation Database* discussed that lithium excretion into breastmilk and concentrations in infant serum are highly variable. Although lithium appears on some lists of drugs—contraindicated during breastfeeding, many sources do not consider it an absolute contraindication, especially in infants over 2 months of age and during lithium monotherapy. Numerous reports exist of infants who were breastfed during maternal lithium therapy without any signs of toxicity or developmental problems. Most were breastfed from birth and some continued to nurse for up to 1 year of maternal lithium therapy.

Some reports suggest that lithium in milk can adversely affect the infant acutely when its elimination is impaired, as in dehydration or in newborn or premature infants. Neonates may also have transplacentally acquired serum lithium levels; however, lithium levels in these infants decline whether they are breastfed or not.

Long-term effects of lithium on infants are not certain, but limited data indicate no obvious problems in growth and development. The authors stated that lithium may be used in mothers of full-term infants who are willing and able to monitor their infants. Because maternal lithium requirements and dosage may be increased during pregnancy, maternal serum levels should be monitored frequently postpartum and dosage reduced as necessary to avoid excessive infant exposure via breastmilk.

Discontinuing lithium 24 to 48 hours before cesarean section delivery or at the onset of spontaneous labor and resuming the prepregnancy lithium dose immediately after delivery should minimize the infant's serum lithium concentration at birth. Some investigators recommend monitoring infant serum lithium, serum creatinine, BUN and TSH at intervals ranging from "periodic" to every 4-12 weeks during breastfeeding and maternal lithium therapy.

One systematic review recommends infant lithum serum level, thyroid and renal function tests only at 10 days postpartum, only if the infant's serum lithium is 0.3 mEq/L or greater or if clinical signs of toxicity appear. Whereas, others recommend close pediatric follow-up of the infant and only selective laboratory monitoring (i.e., serum lithium, TSH, BUN) if clinically indicated by unusual behavior, restlessness, feeding difficulties, sedation or abnormal growth and development. Furthermore, infants who are preterm, dehydrated, or have an infection, should receive hydration and be assessed for lithium toxicity.

Source: Drugs and Lactation Database (LactMed) [Internet]. Bethesda (MD): National Library of Medicine (US). 2020.

Assessment of the Management of Diarrhea Among Children Under Five

Irrational antibiotic use is a worldwide problem. One of the main reasons for excessive use of antibiotics is the failure to follow the clinical guidelines. Inappropriate use of antibiotics for infectious diarrhea is associated with the risk of increasing the development of antimicrobial resistance and the cost of health care.

The goal of a new study published in *Pediatric Health, Medicine and Therapeutics* was to assess the appropriateness of the management of diarrhea in children.

In this retrospective cross-sectional study, conducted in the health centers of Addis Ababa, Ethiopia, from September 2014 and February 2015, demographic characteristics, signs of dehydration, stool characteristics, drug types and other relevant information were collected. Data analysis was performed using version 20 of the SPSS. Logistic regression was used to examine the association between dependent and independent variables. Indicators for the appropriateness of diarrhea management were established on the basis of the Standard Treatment Guideline and the guidelines of the World Health Organization (WHO).

Overall, 803 medical records of children were checked. Of these, 54.4% had received inappropriate management; at least one antimicrobial was prescribed to 73.2% of the children who visited the health

centers; oral rehydration solution (ORS) and zinc were prescribed only in 66.7% and 47.5%, respectively. Appropriate management among children diagnosed with dysentery was found to be 6.38 times higher than in children with watery diarrhea. Although antibiotics are prescribed inappropriately for most children, it was appropriate when the diarrhea is bloody. Meanwhile, appropriate management of diarrhea among infants aged 2-11 months was 54% less compared to children aged 12-59 months.

The results indicated that the magnitude of inadequate antibiotic prescription while managing diarrhea was high. Contrastingly, a low prescribing rate of ORS and zinc was observed. Thus, there exists a need for urgent action to prevent the development of antibiotic-resistant microorganisms. It was stated that health-care professionals should have clear information on the risks of inadequate diarrhea treatment in children under five.

Source: Pediatric Health Med Ther. 2020;11:135-43.

The Science Behind Wet Wipes for Infant Skin: Ingredient Review, Safety and Efficacy

In the diapered area, the continuous exposure to excess moisture and irritants from urine and feces weakens the stratum corneum, making the skin more susceptible to irritation. The use of wet wipes for infants (baby wipes) is a common practice to clean skin after urine or bowel movement, and this practice even extends to cleaning the hands and face, resulting in repeated daily use. Therefore, ensuring that baby wipes contain ingredients that are safe and mild on skin is important to help minimize skin irritation and discomfort.

While disposable baby wipes have been shown to be effective and gentle at cleaning infant skin, even the skin of premature infants, there is growing public concern regarding their safety and tolerability. Not all products are made the same, as differences exist in manufacturing processes, ingredients, materials, safety and quality testing. Therefore, it is important that health care professionals have accessible evidenced-based information on the safety and tolerability of common ingredients found in baby wipes to optimally educate their patients and families. A new article published in *Pediatric Dermatology* provided a review on best practices for ingredient selection, safety, and efficacy of baby wipes.

The findings suggested that in the diapered area, overhydration and presence of irritants from urine and feces are main contributors to skin irritation. Ensuring effective removal of residues from urine and feces, maintaining gentle contact with skin, using products that are free from potential irritants and contaminants and that can support the acid mantle of the skin can help promote skin health.

Over the recent past, significant advances have been made to the development of baby wipes, including removal of ingredients with irritation or allergenicity potential. In fact, several clinical studies have demonstrated that properly formulated baby wipes can be superior to the use of water and cloth, even on premature skin. Nonetheless, consideration should be given to developing a documented protocol for managing and maintaining healthy diapered skin on extremely premature infants, or infants with an underlying skin condition.

When caring for infant skin, it is important to understand all the factors that can contribute to skin irritation and potentially result in dermatitis, as well as being selective about the diapering products used on infant skin. It is important to note that not all baby wipes are made the same.

It was recommended that ingredients in baby wipes should be carefully selected by industry professionals based on their safety profile, allergenicity and tolerability. In addition, wipes manufacturing processes should adhere to quality guidelines established by recognized scientific organizations to ensure the wipes are not contaminated before or after use. Furthermore, safety testing must be performed considering the unique features of infant skin to ensure tolerability, low irritation potential and skin sensitivity to the product.

Source: Pediatr Dermatol. 2020;37(3):447-54.

Maintenance Fluid Requirements in Disease

An article published in *Fluid and Electrolyte Therapy* discussed that maintenance fluid calculations assume that fluid loss from sensible and insensible routes is taking place at a normal rate. But a febrile infant will be having a much greater transcutaneous evaporative water loss than one with a normal body temperature. Similarly, a child with tachypnea will lose excess water from the lungs- unless he/she is receiving humidified oxygen.

The authors stated that in patients with kidney disease who have anuria, oliguria or polyuria – maintenance IV fluids will not be written with the standard formula because their urinary losses are at a normal rate. Maintenance fluids using the standard formula would be too much for an anuric child with no urinary losses

and too little for those with a concentrating defect in their kidneys causing polyuria. Therefore, before using a standard formula for calculating maintenance fluids, ensure that the child is not having higher or lower losses than usual.

When maintenance fluid for a 10 kg child is prescribed for 24 hours as 1000 mL, it is assumed that loss from the various routes is occurring at a normal rate. However, adjustments are sometimes necessary. In cases with tachypnea – add 20-50% to the respiratory replacement; if a person is receiving humidified oxygen, respiratory water loss is nil. In the case of fever, add 10% to the transcutaneous loss replacement for every degree temperature above 38°C for patients with anuria exclude urinary loss from replacement; while in oliguria, the actual urine output should be measured every 12 hours and added to the insensible loss for the next 12 hours; whereas, in polyuria, the actual urine output is measured every 1-2 hours and added to the insensible loss for the next 1-2 hours.

Source: Fluid and Electrolyte Therapy. A Chapter in Core Concepts of Pediatrics, 2nd Edition. 2017. Dept. of Pediatrics University of Texas Medical Branch.

Body Composition and a School Day Hydration State Among Polish Children

Little is known on the relationship between obesity and hydration level in children.

A new study published in the *International Journal of Environmental Research and Public Health* explored the possible association between children's hydration status and body composition, through a survey. This was a cross-sectional study, carried out in 2018, in Preliminary and High Schools from the Malopolska Province, Poland. The study group consisted of 264 children aged 7-15 years. The level of hydration was assessed based on urine osmolality during a school day. The examined had anthropometric tests and body composition assessment. Odds ratio (OR) and 95% confidence interval (CI) were calculated using a logistic regression analysis.

The results found that in the study group, 9.5% of the examined were overweight, 7.2% obese—referring more to the country than towns. Improper hydration was found in 53% of children, while 16.3% were severely dehydrated during a school day. The level of dehydration was higher in children with excessive body fat (BF%) than in children with normal BF%. Older age (>10 years) showed inverse association with dehydration and excessive BF% showed 2.3-fold increase in odds of dehydration during a school day. Moreover, improper hydration was a risk factor of difficulties with concentration declared by students during a school day – OR 2.85.

In inference, it was stated that attention should be paid to appropriate hydration, especially in children with excessive body fat content who feature a higher risk of dehydration and fluid demand.

Source: International Journal of Environmental Research and Public Health. 2020;17(19):E7181. doi: 10.3390/ijerph17197181.

Appropriate Care for Neonates Born to Mothers with COVID-19 Disease

The global COVID-19 pandemic has been associated with high rates of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) transmission, morbidity and mortality in the general population. Evidence-based guidance on caring for babies born to mothers with COVID-19 is needed. However, transmission can happen after birth from mothers or other carers. Based on the currently available data, prolonged skin-to-skin contact and early and exclusive breastfeeding remain the best strategies to reduce the risks of morbidity and mortality for both the mother with COVID-19 and her baby.

Early essential newborn care can be applied for both vaginal and cesarean births if mothers and babies are stable. Mothers should wear medical masks, especially when they are in contact with their newborn infants, and wash their hands or use hand sanitizer before and after touching their baby or direct feeding. Surrounding surfaces should be cleaned frequently and contact with family members should generally be restricted to one key family member. If preterm and low birth weight babies are unable to breastfeed, breast milk should be expressed every 2 to 3 hours and administered by cup, spoon or nasogastric tube in line with national policies. Ideally, larger longitudinal studies are needed to provide definitive data on infection rates of newborn infants born to mothers with COVID-19 managed with and without separation and breastfeeding, for both vaginal and cesarean section births. Currently available data suggest that prolonged skin-to-skin contact and early and exclusive breastfeeding are still the best strategies for reducing morbidity and mortality for both the mother with COVID-19 and her baby, in tandem with rigorous infection prevention and control measures.

Source: Acta Paediatr, 2020;109(9):1713-16.