

Protecting The Little Angels From Covid – 19

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Abstract

Novel coronavirus is a new strain of coronavirus that emerged from zoonosis of Coronaviridae family which causes severe disease in humans among all the nations of the world. The virus can spread from humans to humans through either droplet or contact transmission. An individual can show symptoms after exposure within 1-14 days with an average of around 5-6 days. Some of the manifestations are fever, dry cough, aches and pains, sore throat and severe breathing difficulty. There is no vaccine available at present but the treatment should be focused upon managing symptoms. Without proper drugs or vaccines to treat, preventive measures such as proper hand washing, respiratory etiquette, social distancing and other WHO recommended methods of community care have become mandatory to fight the pandemic. It has led all the nations around the world to lock down the cities and towns demanding the citizens to stay at home. This article throws emphasis on the preventive measures of COVID - 19 in children.

Keywords: COVID – 19; Severe Acute Respiratory Syndrome Coronavirus-2; Child care; Hand washing; Respiratory etiquette; Social distancing.

Introduction

Coronaviruses are a large family of RNA viruses resulting in an ongoing pandemic all over the globe.¹ The outbreak of COVID – 19 was identified in Wuhan, Hubei province, China in December, 2019 for the first time and the cases are no longer limited to Wuhan.² The outbreak has been declared as a public health emergency of international concern (PHEIC) by the World Health Organization (WHO) on 30 January 2020, and recognised it as a pandemic on 11 March 2020.³

Continuous tracing and monitoring its outbreak, trends and changes have to be followed up. Mitigation with this epidemic threat is very crucial. At the same time, obtaining and analysing the

existing information at the global level is essential so as to foresee what course of action this coronavirus might take place in the future.¹

Coronavirus is zoonotic in nature and is one among the seven known coronaviruses in humans that include HCoV-229E, HCoV-OC43, SARS-CoV, HCoV-NL63, HCoV-HKU1 AND MERS-CoV. Corona virus has spikes on its molecular structure which helps in adhering the virus to bind to the host cells that results in the transmission of COVID – 19 through human contact.⁴

Coronavirus disease (COVID - 19) is an infectious disease caused by a new strain of coronavirus.⁵ The acronym of COVID – 19 is

‘CO’ – CORONA

‘VI’ – VIRUS

‘D’ – DISEASE

‘19’ – 2019.

Earlier, COVID - 19 was referred as ‘2019 novel coronavirus’ or ‘2019-nCoV’.⁶

The causative organism of COVID – 19 is a novel coronavirus.⁷ It was called as Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-

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CoV-2 or 2019-nCoV) officially declared by the World Health Organization (WHO) on February 11, 2020. The taxonomy of Human coronavirus is described as

Order : Nidovirales
 Family : Coronaviridae
 Genus : Alphacoronavirus or
 Betacoronavirus.^{8,9}

Coronavirus can spread through either droplet or contact transmission. The Corona virus is transmitted through direct contact (human-to-human) mostly via small respiratory droplets of an infected person through sneezing and coughing. It can even spread by interacting with each other for some period of time in close proximity. The droplets can be inhaled when the surfaces are contaminated by the virus via touching their nose, mouth or eyes. The SARS-CoV-2 virus lands on different surfaces that an infected person may touch and can survive on them for a few hours to several days.^{7,10,11}

The "incubation period" is referred to as the time between exposure to the virus and onset of symptoms of the disease. The incubation period for COVID-19, range from 1-14 days, most commonly around five days.⁷ Children with SARS-CoV-2 infection may be asymptomatic or usually mild and begins gradually developing fever, cough and fatigue with a few upper respiratory tract and gastrointestinal infections. The child may suffer with the following symptoms:¹²⁻¹⁷

- Nasal congestion
- Nasal discharge (watery mucus)
- Sore throat
- Shortness of breath
- Diarrhea
- Nausea or vomiting
- Fatigue
- Headache
- Myalgia
- Poor feeding or poor appetite

In severe cases, COVID - 19 may lead to pneumonia or breathing difficulties. More rarely, it can be life-threatening in children.⁶

At this point of time, there are no specific vaccines or treatments available for coronavirus disease. Symptomatic care is provided to treat the manifestations accordingly as they differ in

each child. Hospitalization is necessary if the children have serious illness. Moreover, there are many continuing clinical research trials evaluating prospective treatments.⁵

Covid - 19: Newborn and Infancy

Breastfeeding plays a most significant role in the child's survival, nutrition and development as well as for the maternal health.¹⁸ Breastmilk safeguards a neonate from getting unwell and also helps to secure them all over their infancy and childhood. It is effective in reducing the risk of infectious diseases.¹⁸⁻¹⁹ There are most abundant protective elements in human milk, comprising of the immunoglobulins, antiviral factors, cytokines and leucocytes that boosts up the new-born's immune system by killing the microbes which are detrimental.¹⁸

To date there is no evidence that COVID-19 can be transmitted through breast milk.²⁰⁻²¹ Nevertheless, the mothers suspected or confirmed with SARS-CoV-2 who are breastfeeding or practicing skin-to-skin contact (Kangaroo mother-care) should be isolated and appropriate preventive measures must be taken.²²

In fact; the health professionals should recognize the importance of advising the mothers to wash hands thoroughly with soap and water or with an alcohol-based hand rub frequently for at least two minutes. It is also mandatory to perform handwashing before and after contact with the neonate or an infant. If available, use of a mask while breastfeeding or caring the child is suggested. Movement in the house and surroundings is unavoidable by any person and there is no exception for a mother. She will have to move around even in the lockdown at home but the rooms or places that she has moved in or out will definitely be contaminated with the virus. Therefore, it is mandatory to regularly clean the places that she moves by disinfectants or alcohol-based hand rub or other means. Thus, this prevents the baby coming in contact with the virus stricken place.

Mother along with the child should practice physical distancing from other people (at least 1.5 m). Also, advise the mother not to avoid touching eyes, nose and mouth. Instruct the mother to perform cough etiquette by covering with a tissue and to be discarded in the bin immediately. Mothers need to be re-assured that it is safe to breastfeed their children.^{14,15}

In case of severe illness with COVID-19 or other health complications, the mother can discontinue direct breastfeeding to the child instead she should express the breast milk. The family members should be encouraged and supported to safely provide expressed breastmilk to the infant by applying appropriate hygiene measures. The appropriate hygiene measures include: caretakers washing their hands prior to feeding; cleansing the feeding bottle in boiling water thoroughly; cleansing the breast pump properly after each use. The expressed breastmilk should be fed to the child using a clean cup and/or spoon, preferably by a person who has no signs or symptoms of illness.²³⁻²⁴

Apart from breastfeeding keep on track with the vaccinations so as to safeguard the child from various infectious bacterial and viral agents.⁵

Covid – 19: Older Children

Prevention is the best key to avoid the risk of being affected with the harmful pathogens. Hence, the older children must be taught regarding the importance of carrying out the preventive measures such as frequent hand washing, and respiratory etiquette. It is very much essential for the parents to instruct the children to perform handwashing regularly as it destroys the unseen microbes especially before and after eating; after blowing the nose, coughing, or sneezing. In addition, after playing with the toys or other playing devices or electronic gadgets, hand washing has to be done strictly and the parents have to have an eye on the children round the clock.

Handwashing must be practised by using soap and water if readily available. If not available, instruct the child to use an alcohol-based hand sanitizer. The parents also must make sure that the alcohol-based sanitizer should have at least 60% alcohol. A child touches many surfaces at home and can pick up the viruses. As their hands get contaminated with virus, they themselves can transfer the virus to their eyes, nose or mouth. Thus the virus enters into the body which leads to lowered immune system in the child. So, it is the responsibility of the parents to safeguard the child especially in tough times.

Instruct the child to practice respiratory or cough etiquette by covering the mouth and nose with flexed elbow or tissue when coughing or sneezing. If the child uses a tissue, ask him/her to discard the used tissue immediately into the bin. Also command the child to close the bin after disposal. Advise the child to avoid in contact with anyone who has cold or flu-like symptoms.⁶

Use of mask if available is also advisable in case if any of the family members have flu-like symptoms such that the virus cannot be transmitted to the children or other persons. Ensure that the mask is kept properly (snugged tightly) covering the nose and mouth. Soon after the mask gets soiled, it has to be discarded in a closed bin. It is necessary being parents to keep an eye on the child regarding the usage of mask and proper disposal to avoid transmission of the virus to others. Make sure that the disposable masks can be used only for a single time. Explain the child putting a mask is alone not enough to fight COVID – 19. Following a regular and thorough handwashing as well as cough etiquette with flexed elbow or a tissue is quite essential. Also instruct the child strictly to avoid a close contact with others who suffer with flu-like symptoms (coughing, sneezing and fever).

Social distancing plays a significant role apart from all the necessary preventive measures. Insist the child to maintain at least 1 metre (3 feet) distance between him/her and others who have the manifestations of coughing or sneezing. Avoid the child to go outdoors unnecessarily and to stay away from a large group of people. It is also necessary for the child to be known the rationale behind this - if someone coughs or sneezes, they release small liquid droplets from their nose or mouth that may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person coughing has the disease.

If the child has respiratory infections such as symptoms of flu, seek medical treatment. Good bed rest is essential. Avoid the child to go out of the home to prevent spread to others. Seek medical attention, if the child develops fever, cough or difficulty in breathing, in advance without being neglected. It may sometimes lead to the deterioration of the condition of the child. As parents are the only primary caregivers; repeatedly instruct the child to follow all the necessary precautions to fight against COVID – 19.

Furthermore; it's quite significant for the parents to clean and disinfect the frequently touched surfaces such as phones, remotes, doorknobs, light switches and countertops to prevent the transmission of virus. A healthy diet is essential for good health and nutrition to protect against the risk of developing infections and disorders. Ensure that all the fruits and vegetables must be washed thoroughly before washing your hands with soap and water.⁵

In conclusion; as COVID - 19 is one of the deadliest disorders surrounding all the nations in the world. Taking care of the future generations amidst covid-19 is the need of the hour in this difficult circumstances. It is a great responsibility of the parents in handling and caring of the children being affected. Hence, it is also quite significant to continue to teach the children all the precautionary measures to fight against coronavirus.

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