

Vertical Transmission of Novel Coronavirus (COVID-19) from Mother to Newborn: Experience from a Maternity Unit, The Indus Hospital, Karachi

Sir,

Coronavirus disease 2019 (COVID-19) caused by novel coronavirus (SARS-CoV-2), was initially identified in Wuhan, China, but has now developed into a dangerous pandemic. It is said to be transmitted from human to human through respiratory droplets; however, it can also be transmitted *via* contact with contaminated surfaces¹.

The most common depiction of this disease includes symptoms such as flu-like fever, cough, fatigue, myalgia, headaches, along with sputum production. It can soon spiral into respiratory distress, followed by systemic inflammatory response, ultimately leading to multi-organ dysfunction.² Pregnancy is known to be an immune-compromised state, albeit with physiologic adaptation, due to which pregnant women are relatively more susceptible to contracting COVID-19.³

In a case reported by Alzamora *et al.*, a mother was admitted with COVID-19 had developed respiratory failure. The baby was delivered by cesarean section without delayed cord clamping and skin to skin contact; and was immediately shifted to isolation. Nasopharyngeal swab of neonate was performed at sixteen hours of life, after which the baby was reported positive for coronavirus.⁴

A systemic review performed by Zaigham *et al.* on 108 pregnancies, reported that vertical transmission from mother to babies cannot be ruled out.⁵

As per our Hospital policy, COVID-19 testing is performed on all mothers prior to normal delivery or elective cesarean section due to the possible risk of aerosol exposure. During the course of this pandemic from 27th April 2020 till 16th June 2020, a total of 585 babies were delivered. Information has been gathered on all women who were tested positive for COVID-19 virus. A staggering 66 mothers were reported positive, but proved to be asymptomatic at large. Twenty out of the 66 COVID-19 positive mothers were delivered *via* spontaneous vaginal delivery, including one set of twins; while 7 out of 66 mothers were delivered *via* elective cesarean section. Other than this, 40 of 66 mothers went through emergency cesarean section that was carried out under spinal anesthesia, conducted in an operation theatre specifically assigned for COVID suspected/positive

patients. Nasopharyngeal swab PCR was done in all 67 neonates at birth, which were reported negative. All babies remained stable in the COVID isolation ward with their mothers. Direct mother feed was continued with face mask for the mothers, and all babies were discharged after 48 hours of life; and provided with respective follow-up schedules.

Although there has been no concrete understanding of coronavirus and its association with vertical transmission, there have been a few cases reported where neonates of COVID positive mothers have tested positive. All in all, there is still a lack of evidence to fully confirm whether or not vertical transmission is occurring from mothers to their newborns. Nonetheless, here, at our hospital, we have still yet to see any cases of neonates contracting coronavirus as a result of their mothers testing positive for COVID-19.

CONFLICT OF INTEREST:

The authors declared no conflict of interest.

AUTHORS' CONTRIBUTION:

MAK, VK, SRA: Substantial contribution to the conception or design of the work; drafted the work and revised critically.

REFERENCES

1. Valencia DN. Brief review on COVID-19: the 2020 pandemic caused by SARS-CoV-2. *Cureus* 2020; **12**:3.
2. Ma K, Chen T, Han M, Guo W, Ning Q. Management and clinical thinking of coronavirus Disease 2019. *Zhonghua gan Zang Bing za zhi= Zhonghua Ganzangbing Zazhi = Chinese J Hepatol* 2020;28:E002-E.
3. Luo Y, Yin K. Management of pregnant women infected with COVID-19. *Lancet Infec Dis* 2020.
4. Alzamora MC, Paredes T, Caceres D, Webb CM, Valdez LM, La Rosa M. Severe COVID-19 during Pregnancy and Possible Vertical Transmission. *Am J Perinatol* 2020.
5. Zaigham M, Andersson O. Maternal and perinatal outcomes with COVID-19: A systematic review of 108 pregnancies. *Acta Obstetrica et Gynecologica Scandinavica* 2020.

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