CORRESPONDENCE

Vertical Transmission of COVID-19

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To the Editor: We reviewed the hospital records of neonates delivered to 176 COVID-positive mothers admitted in our university (mid-May to mid-December 2020). All these neonates were tested by RT-PCR of nasopharyngeal swab within 48 h of birth.

Out of 179 neonates (3 twins), 7 (3.3%) were COVIDpositive. All except 1 were born by lower segment cesarean section. Five were asymptomatic and 2 had severe birth asphyxia; of which 1 expired within 2 h of birth. The other neonate was intubated in delivery room for 72 h. Sepsis screen was negative but CRP was raised (15.5 mg/dL). Blood culture was sterile. On day 9, repeat RT-PCR was negative and the neonate was discharged on day 14. Of the positive neonates, 3 were on exclusive breast-feeding and others were on formula feed. Skin-to-skin contact was not provided, as guidelines at that time were not clear.

On repeat testing (day 5–7) by RT-PCR, all positive neonates tested negative. Of the 172 neonates who tested negative within 48 h of birth, 24 were retested after day 5 and all were negative.

Our data for vertical transmission of SARS-CoV-2 was similar to that found in other studies abroad and from India [1]. The rates were higher from a study from India (10.7%). Most of their neonates were asymptomatic and none died due to SARS-CoV-2 [2]. However, data from Mumbai reported higher rates of vertical transmission (4.25%), more symptomatic neonates, and mortality (16.6%) [3]. The authors also reported multisystem inflammatory syndrome (MIS-C) in 1

neonate. Another study from Mumbai [4] reported infection rate of 10.9%, a third had symptoms.

In our hospital the perinatal transmission rate of SARS-CoV-2 was low, and was maximum at the time of peak of COVID transmission in September 2020. Most cases were asymptomatic with no mortality attributable to SARS-CoV-2.

Declarations

Conflict of Interest None.

References

- Yang Z, Liu Y. Vertical transmission of severe acute respiratorysyndrome coronavirus 2: a systematic review. Am J Perinatol. 2020;37:1055–60.
- Anand P, Yadav A, Debata P, Bachani S, Gupta N, Gera R. Clinical profile, viral load, management and outcome of neonates born to COVID 19 positive mothers: a tertiary care centre experience from India. Eur J Pediatr. 2020;10:1–13.
- Shah B, Dande V, Rao S, Prabhu S, Bodhanwala M. outcome of covid-19 positive newborns presenting to a tertiary care hospital. Indian Pediatr. 2021;58:177–9.
- Nanavati R, Mascarenhas D, Goyal M, Haribalakrishna A, Nataraj G. A single-center observational study on clinical features and outcomes of 21 SARS-CoV-2-infected neonates from India. Eur J Pediatr. 2021;5:1–12.

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