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Mini-commentary on BJOG-20-1589.R1: Umbilical cord clamping and skin-to-skin contact in deliveries from women positive for SARS-CoV-2: a prospective observational study

Applying the principle 'First Do No Harm' during the pandemic

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Jiménez and colleagues (BJOG 2020 xxxx) present outcomes from 403 SARS-CoV-2 positive pregnant women and their newborns that received either delayed cord clamping > 30 seconds (DCC) or early cord clamping < 30 seconds (ECC). The recommendations from the Spanish Ministry of health and the International Federation of Gynecology and Obstetrics (FIGO) discouraged the use of DCC in efforts to reduce the potential for vertical transmission of SARS-CoV-2 (Poon LC, et al. Int J Gynecol Obstet 2020, 149, 273-286). Jiménez and colleagues demonstrated that there was no increased transmission with DCC. Overall, the transmission rates were low. Infants who had DCC also had higher rates of breastfeeding and early skin to skin.

Two infants with ECC and 3 with DCC had a positive test within the first twelve hours of life, but all 5 of these cases were negative when the test was repeated at 12-48 hours of life. All infants were followed out to 14

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days. Only one infant tested positive between 12-48 hours of life after having a negative test < 12 hours of life likely due to horizontal transmission from a positive household member, and thereby was deemed unlikely to be related to perinatal events.

There were many limitations in their analysis such as the association with early clamping with earlier gestation, higher rate of ECC in symptomatic mothers with COVID-19 disease, increase cesarean section and sicker mothers, and overall low number of positive neonatal cases. Despite these limitations, this is one of the larger prospective datasets comparing DCC with ECC in SARS-CoV2 positive mothers. Longer-term follow-up of these infants would provide further reassurance.

During this pandemic, hospital protocols for mother-baby care fluctuates frequently and cord management evolved during the time span of this study from being predominantly ECC to mostly DCC. These changes took place concurrently as clinical practices progressively returned to allowing mother-baby dyad care without separation. With the shift to allow skin to skin and breastfeeding while SARS-CoV2 positive mothers don masks and practice good hand hygiene, the risk of postnatal horizontal transmission is low. Moreover, existing literature suggests that rate vertical transmission is low (Karimi-Zarchi M, et al. Fetal Pediatr Pathol. 2020, 39:246-250). For those reason, it is unlikely that an extra 30 to 60 seconds spent on DCC would increase the risk of perinatal acquisition of the virus.

DCC allows recirculation of placental blood to return to the newborn infant as the lungs are recruited which would not increase the risk of vertical transmission. In fact, guidelines for viruses known to occur with viral transmission such as HIV do not discourage delayed cord clamping (WHO Guideline. Geneva: World Health Organization; 2014). The benefits of improved survival in preterm infants and improved neurodevelopmental outcomes in term infants outweigh the rare and unlikely risk of acquiring SARS-Cov-2 by keeping the cord intact for a short duration. While we continue to practice medicine in uncharted territory where we have no protocols to govern our decisions perhaps is why "primum non nocere" is an extremely enduring phrase.

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