

Background In spite of recent improvements in the outcomes of preterm infants, sepsis remains to be an important cause of mortality and morbidity. Studies have noted the rise of Gram-negative infections as causes of sepsis in the preterm population.

Objectives We aim to describe the epidemiology, trends and microbial distribution of neonatal sepsis episodes among preterm infants born <32 weeks gestation over a 13-year period.

Methods This is a retrospective single-centre cohort study of culture-confirmed neonatal sepsis episodes, which is defined as the isolation of pathogenic organism from blood and/or cerebrospinal fluid cultures. We included newborns that were admitted to the Neonatal Intensive Care Unit (NICU) who were < 32 weeks birth gestation and birthweight of ≤1500 g. Neonatal sepsis episodes were stratified into early-onset sepsis (EOS) occurring at <72 hours of birth and late-onset sepsis (LOS) occurring >72 hours after birth up till discharge.

Results A total of 2019 preterm infants were included in the study. The characteristics of the cohort: 52.7% male, median birth gestational age 28 weeks, 19.9% small-for-gestational age, 89.9% received antenatal steroids, 85.5% had a central venous catheter. Over the study period, 263 infants had a total of 273 episodes of culture-confirmed sepsis –49 EOS and 224 LOS episodes. Incidence of sepsis in this cohort decreased from a high of 24.2% in 2006 to 7.4% in 2017. This was concordant with a decrease in LOS over the same period: 16.8%-21.6% from 2005–2006 to 4.9% in 2017. EOS incidence remained relatively stable, ranging from 0–4.4%. Gram negative bacteria were the predominant pathogen group isolated, accounting for 186/281 (66.2%) of all organisms– 40/49 (81.6%) of EOS and 146/224 (65.2%) of LOS episodes. *E Coli* [24/49 (49.0%)] and *Klebsiella spp* [39/224 (17.4%)] were the most common microbial causes of EOS and LOS episodes respectively. Coagulase negative staphylococcus (CONS) accounted for 36/224 (16.1%) of LOS. Fungal infections were predominantly due to *Candida spp* - 12.1% (27/224) of LOS. Of note, there were no fungal infections detected over the recent 5 years.

Conclusions The decrease in the overall incidence of neonatal sepsis among preterm infants <32 weeks in our centre over the 13-year study period, is due to a reduction in LOS. Gram-negative bacterial organisms are the predominant infecting organism in this population with *E.Coli* and *Klebsiella spp* being the most common causes of EOS and LOS.

386

KNOWLEDGE, ATTITUDES AND EXPECTATIONS OF PERINATAL CARE DURING THE COVID-19 PANDEMIC

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Background There is limited evidence regarding the transmission SARS-CoV-2 from mother to infant, as well as the optimal management of infected women and infant during pregnancy, labor and early postnatal period. The knowledge, concerns and expectations of women with regards to perinatal and neonatal care during this current COVID-19 pandemic is currently unclear.

Objectives This study aimed to investigate the knowledge and expectations of pregnant women on perinatal and neonatal

care during the coronavirus disease 2019 (COVID-19) pandemic in Singapore.

Methods A cross-sectional survey was administered via a secure online platform to pregnant women attending the antenatal clinics between August 2020 and September 2020. Participants aged >21 years who were pregnant and had no history of confirmed COVID-19 were included in the study. The survey consisted of 10 questions formulated to evaluate the knowledge and expectations of these women on the perinatal and neonatal care during this current pandemic.

Results A total of 313 pregnant women completed the survey during the study period. The mean age of the participants was 30 years (SD 4; range 22–43 years). The median gestational age of women at survey participation was 25 weeks (range 4–40 weeks). The participants were predominantly multiparous (54%) and almost all (98%) had completed secondary level education. Majority of participants were aware of the spread of COVID-19 by respiratory secretions and contact (90%), and the importance of hand hygiene and face masking (94%). Up to 72% agreed or strongly agreed that in-utero transmission of SARS-CoV-2 to the unborn foetus was possible. Most were unsure of the optimal mode of delivery (77%) and only 22% believed that breastfeeding was safe in a pregnant women with active COVID-19. There was no significant association between the sociodemographic factors evaluated and maternal agreement with the possibility of in-utero SARS-CoV-2 transmission and the risk associated with vaginal delivery in women with COVID-19. Although 46% of participants were concerned about the increased risk of contracting COVID-19 during routine clinic appointments at the hospital, only 37% of the cohort were agreeable with teleconferencing of clinic appointments. More than half (56%) of the participants reported that their postnatal confinement plans were affected by the current pandemic.

Conclusions Our survey revealed that majority of participants were aware of modes of transmission and the prevention strategies of SARS-CoV-2, there were however significant gaps identified in their knowledge related to the risk of in-utero transmission and safety of breast feeding along with significant variability to the agreement with alterations to the perinatal care. For best practice we recommend provision of evidence based information early to expectant mothers by the healthcare professionals to reduce misinformation and anxiety amongst pregnant women related to the current pandemic.

391

HEALTH STATUS OF CHILDREN WITH DOWN SYNDROME IN MYANMAR

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Background Down Syndrome children have complex health-care needs. There was no previous data of Pediatric Down Syndrome (PDS) in Myanmar and little is known about their health status and challenges to seek proper screening tests and health care services. Since there are no established local guidelines for PDS, limited resources and inaccessibility to specialty centers especially for those from remote areas, more health care challenges are encountered throughout the country.

Objectives To assess the health status, screening tests and follow up conditions of Myanmar Down Syndrome children