

Third level care experience during SARS-CoV-2 pandemic

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Objective. As the SARS-CoV-2 Pandemic has widely changed pregnancy experience and assessment, the inpatient and outpatient services have had to be re-organized. Since March 2020, Careggi University Hospital (CUH) has provided a dedicated COVID-pathway: spaces for women with unknown swab status and a COVID-19 ward delivery room. The aim of this study is to analyze the inpatient and outpatient COVID-19 related activities in CUH.

Materials and Methods. We prospectively collected data from consecutive COVID-19 pregnancies referred from 2020 to 2022, included in the local branch of the ItOSS surveillance. All patients experienced COVID-19 in pregnancy at various stages of severity and gestational ages.

Results. From March 2020 to June 2022, 165 COVID-19 deliveries occurred (169 newborns), while 16 pregnant positive women were admitted without delivering. A single emergency C-section (CS) was performed because of Sars-CoV-2 related ARDS, 15 women experienced serious maternal morbidity and 5 needed ECMO. A single maternal death occurred four months after delivery (C-section). Considering ECMO supported cases during pregnancy or postpartum, the first one tested positive for COVID-19 during the second trimester. She developed ARDS and required ECMO for 38 days. She was discharged in good general conditions and a CS at term was performed following obstetric indication. The second patient developed COVID-19-related ARDS at 28 weeks of gestation and experienced a precipitous vaginal delivery at 31 weeks+6 days of gestation while on ECMO. She was discharged 1 month later in good general conditions. The third patient was an obese (BMI 38) 43-year-old woman who had performed an

IVF with embryo donation; she tested positive at 38 weeks+2 days of gestation. A CS was performed because of the worsening of her condition. After the delivery she was admitted in ICU and she underwent ECMO. She died 143 days after the CS by sepsis and multiple organ failure (MOF). For all these pregnancies neonatal outcomes were positive.

No perinatal death occurred and only one baby tested positive for SARS-CoV-2 infection at nasal swab sampling (case 3). The anesthesiology team performed neuroaxial analgesia intrapartum in all the positive women who needed/requested it. Monoclonal Antibodies (mAbs) have been widely used to treat mild to moderate COVID-19 outpatients (NIH and RCOG recommendations) at risk for developing severe disease. Regarding this specific therapy, an essential role in the management of the pregnant outpatient was played by the Infectious Disease Department. All patients above 28 weeks requiring hospitalization received LMWH prophylaxis, which was administered under 28 weeks only in presence of additional risk factors (obesity, IVF, etc.). All new mothers received a ten days LMWH prophylaxis. On the outpatient side, we performed 22 teleconsultations, 43 obstetric ultrasounds (including I trimester screening), 90 obstetric checks with clinical evaluation and home therapy management, 32 fetal monitoring and 47 naso-pharyngeal swabs.

Conclusions. At Careggi Hospital Maternal Department an extensive re-organization of inpatient and outpatient services has been performed in order to guarantee good practice and management of all pregnant women during the SARS-CoV-2 pandemic. This was only possible thanks to a wide multidisciplinary group which enhanced every professional.