



Coronavirus: Clinical management and testing explained

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Lessons learned from the ISUOG Webinar on 14th April 2020

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Coronavirus: Clinical management and testing explained – Lessons learned

Vertical transmission evidence and how this translates into clinical management – Prof Yang (China)

- **Clinical manifestations of COVID-19 in pregnancy similar to those in nonpregnant adults, with no evidence of higher mortality. Management should include 1) fluid & electrolyte balance, 2) oxygen, 3) antibacterial and 4) antiviral treatment, 5) LMWH and 6) fetal monitoring. Individualized timing & mode of delivery.**
- **To date no evidence of vertical transmission of SARS-CoV-2 from amniotic fluid, cord blood, placenta and neonatal nasopharyngeal swab samples. Recent data suggesting vertical transmission as witnessed by IgM antibodies in neonates requires confirmation from further research.**

Management of labour in the era of COVID-19 – Prof Prefumo (Italy)

- **Suspected/confirmed COVID-19 in labor: isolation, negative pressure room, continuous CTG as hypoxia may occur. Drills not possible. Two separate teams (O&G, Neonatal) needed, avoid skin-to-skin, controversies regarding delayed cord clamping. Data from Lombardy shows that only 10% of deliveries are performed by CS due to severe maternal respiratory insufficiency. Options at delivery (to be considered on a local basis): 1) newborn temporarily separated from the mother and tested by nasopharyngeal swab, 2) rooming-in and breastfeeding.**
- **Medications for obstetric complications to be used as in the case of non-COVID-19 patients. Individualized management: Betamethasone can be administered if threatened preterm labour. Be aware of thromboembolic disease, LMWH to all pregnant COVID-19 patients requiring admission.**
- **Patients with unknown SARS-CoV-2 status in the context of an epidemic outbreak: be aware that 13.5% of unselected attendees are asymptomatic but positive.**
<https://www.nejm.org/doi/full/10.1056/NEJMc2009316>

Lung ultrasound in the context of COVID19 and can obstetricians learn it? – Prof Testa (Italy)

- **Lung USS: easy, low cost, can be performed at bedside, using portable devices, at the same time & by the same practitioner of obstetric USS, repeatable over time for longitudinal assessment. Standard approach: 14 areas to be examined (6 posterior, 4 lateral, 4 anterior).**
- **Lung USS suggested for early diagnosis and monitoring of COVID-19 pneumonia. USS findings suspicious for COVID-19 pneumonia include 1) patchy distribution of interstitial artifactual signs, 2) thickened pleural line, 3) diffuse hyperechoic vertical artifacts and 4) areas of “white lung”.**
- **ISUOG tutorial on lung ultrasound: <https://www.isuog.org/clinical-resources/coronavirus-covid-19-resources/research-and-journal/lung-ultrasound-pregnancy-covid19.html>**

Testing reliably for SARS-CoV-2 – Dr Mullins (United Kingdom)

- **Viral PCR: several tests developed so far, different limits of detection based on the number of copies of the gene tested. Sample: upper respiratory tract, probably nose and throat swab better than oropharynx. Sensitivity: de facto unknown, depending upon 1) viral load, 2) type & quality of the sample (viral load decreasing over time), 3) timing of the test following the onset of the symptoms. Specificity: 100%, positive test = infected.**
- **Antibodies testing by ELISA for IgM and IgG: IgM and IgG can be detected at a median of 6 and 14 days following the onset of the symptoms, respectively. IgG persisting well above the cut-off for immunity at 240 days following infection.**
- **Combination of viral PCR & antibodies testing suggested to increase the sensitivity. Home testing kits: unacceptable false negative rate.**