Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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The first pregnant woman with COVID-19 in Venezuela: Pre-symptomatic transmission

Dear editor

Since the first confirmed case from Latin America in February 25th, 2020 in São Paulo, Brazil, SARS-CoV-2 cases have rapidly began to spread across the Latin America [1]. Available data about COVID-19 and its impact in this region is limited, including pregnant women data. Here we present the first confirmed case of a pregnant woman with COVID-19 in Venezuela, who was presumed to be infected by her mother during her pre-symptomatic phase.

On March 28th, a 32-year-old female, with 38-week of pregnancy, without comorbidities, presented to the University Hospital of Caracas, with dry cough, and fatigue. Her symptoms started 12 days prior, when she noticed headache and anosmia. She had no previous travel history or contact with any respiratory-symptomatic person before onset of symptoms. On admission, physical examination and laboratory findings revealed no relevant alterations.

The patient consulted accompanied by her mother, who had been in the United States since October/2019, followed by a trip to Peru on February 22nd where she remained in Lima until March 10th, when she returned to Caracas. The mother was asymptomatic until March 25th (Fig. 1). The pregnant patient and her mother lived together. Nasopharyngeal swab samples were collected from both which tested positive for SARS-CoV-2 real-time RT-PCR at the "Rafael Rangel National Hygiene Institute". The patient's husband and her two other children were asymptomatic, nasopharyngeal swab samples were collected for the complete family nucleus; testing negative for SARS-CoV-2. On March 31st, 2020, she was admitted for a caesarean section. Her son was born without complications, testing negative for SARS-CoV-2 (rRT-PCR).

SARS-CoV infection has been associated with poor pregnancy outcomes, including critical maternal illness [2]. Similarly, SARS-CoV-2 associated preterm birth has been reported [3]. This case's presentation showed no significant alterations related to COVID-19, as it has been recently reported in a retrospective study [4]. On the other hand, to date, there has been no evidence of vertical transmission of COVID-19. In this case, three nasopharyngeal swabs obtained from the newborn infant were repeatedly negative for SARS-CoV-2.

Interestingly, the pregnant woman developed symptoms before her contact did. This could be explained in part, by the immunosuppressed state of pregnancy where there is attenuation of the cell-mediated immunity by Th1 cells due to the physiological shift to a Th2 dominant

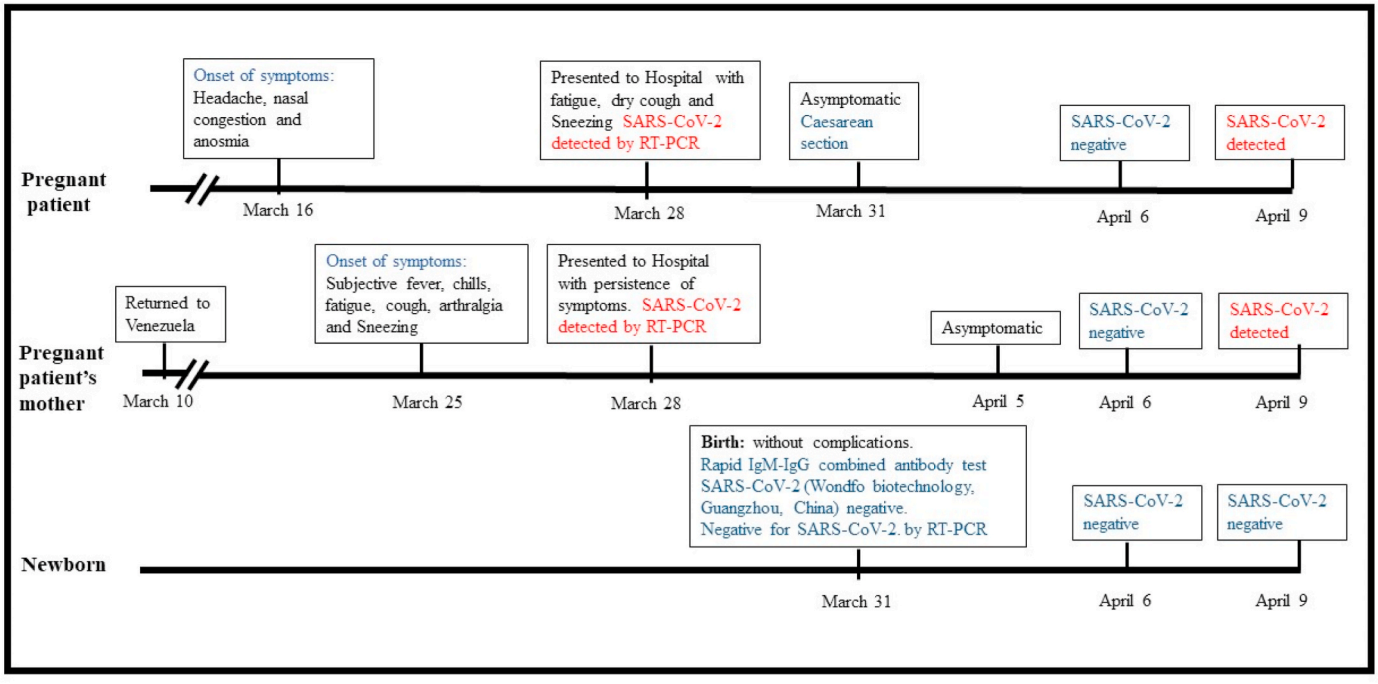

Fig. 1. Timeline of the pregnant patient: symptoms and results of rtPCR testing for SARS-CoV-2 by date.

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environment [5], with this contributing to overall infectious morbidity by increasing maternal susceptibility to intracellular pathogens like viruses. Additionally, person-to-person transmission within cluster families, by pre-symptomatic [6], or even asymptomatic infectors has been previously reported.

With the increase of the pandemic in Latin America, a region with high fecundity rates and a fragile health system we should expect to see more cases of COVID-19 among pregnant women. Therefore, pregnant women and their newborn babies should be considered a key high-risk population in the development of prevention and management strategies for COVID-19. This vulnerable group needs to be studied in detail to better understand its clinical impact.

Declaration of competing interest

All authors declare that they have no conflicts of interest.

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