

## EDITORIAL

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**Funding:** The author received no specific funding for this work

**Conflict of interest:** The author declares no conflict of interest

Received: 20 September 2020

Accepted: 29 September 2020

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**Cite as:** Pacheco-Romero J. Steps forward and backward in the COVID-19 pandemic. *Rev Peru Ginecol Obstet.* 2020;66(3). DOI: <https://doi.org/10.31403/rpgo.v66i2272>

# Steps forward and backward in the COVID-19 pandemic

## Pasos adelante y hacia atrás en la pandemia COVID-19

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DOI: <https://doi.org/10.31403/rpgo.v66i2272>

It has been 9 months – time like a pregnancy - when we had the communication from Wuhan, China, about a viral disease caused by SARS-CoV-2, on December 31, 2019. Since then, the virus has invaded practically the whole world. Its morphology, genome and its selective attachment to the angiotensin converting enzyme 2 (ACE2) receptor are now known. The ACE2 receptor is abundant in the endothelium of arteries and veins, but also in the epithelium of the respiratory tract<sup>(1)</sup>. By entering the human body and multiplying, it causes an acute respiratory distress syndrome that is followed by cardiogenic shock, thromboembolic events, involvement of bronchi, lungs, the nervous system<sup>(2)</sup>, renal failure<sup>(3)</sup>, compromise of the gastrointestinal system<sup>(4)</sup>, mental disorders<sup>(5)</sup>, skin problems<sup>(6)</sup>, among others. The child seems to be infected less, often asymptotically, but his viral load may infect adults<sup>(7)</sup>. The lower development of COVID-19 in children would be associated with a lower number of ACE2 receptors in their respiratory tract, some protection given by common colds, lower levels of inflammatory cytokines, among others<sup>(8)</sup>.

But, in these months we have not yet learned how to defeat the virus, how to cure COVID-19, nor do we have a vaccine.

Peru is currently considered the country with the highest death rate per 100 000 inhabitants in the world and, although the numbers of infected people and deaths are decreasing, the growth of a new wave of infections and deaths in European and Asian countries, which were in sharp decline, is leading to new confinements and health preparation for what might come.

In relation to women, it is a relief to know that the virus is less likely to cause them damage compared to men. Her chromosomes, innate immunity, hormones<sup>(9)</sup>, and possibly a different cardiovascular and pulmonary vascular endothelium, among others, would protect her.

But we are concerned about the pregnant woman, initially considered as little compromised by the virus despite her vulnerability. The news indicated that they were going through their pregnancy without major setbacks, although some cases of premature delivery was observed, and few pregnant women required ventilatory support and admission to the ICU due to serious complications. This was similar to what happened with non-pregnant women of their age. Investigations in the first months of the pandemic showed no vertical transmission and little neonatal infection.

Prenatal visits and control, routine ultrasounds, and surgical interventions were restricted in the management of the pregnant woman, except



for emergency cases. But gradually, communications from China, Italy, Spain and other countries indicated that maternal-perinatal complications would not be so few or superfluous.

In Peru, the first case of COVID-19 in the population was reported on March 6, 2020, with declaration of compulsory personal prevention measures, social distancing, quarantine and night and Sunday curfew. The Peruvian health system, with similarity to most of the world, was unprepared for a health crisis of the magnitude of COVID-19. The national hospitals could not cope with the wave of serious infection that suddenly appeared, and the government did not establish preventive measures for mass detection of through infected through molecular tests, but rather they did so with rapid tests and without tracing for the contacts of those infected. There was congestion in markets, banks, transport, which allowed the contagion of many other people.

The first cases of COVID-19 in the Peruvian pregnant woman appeared in April, having The Peruvian Journal of Gynecology and Obstetrics (PJGO) published in advance on the care of women in labor diagnosed by rapid tests at the Instituto Nacional Materno Perinatal<sup>(10)</sup> and the Hospital Nacional Edgardo Rebagliati Martins, Essalud<sup>(11)</sup>, as well as the start of specialized care for childbirth in private institutions during the pandemic<sup>(12)</sup>.

In this issue of the PJGO we publish Peruvian experiences in pregnant women with COVID-19 in four important reference hospitals in Lima and one in Cajamarca (at 2 750 masl), as well as a systematic review on the vertical transmission of COVID-19.

In the articles from the five hospitals, which group 3 603 pregnant women, it is observed that the average age was around 27 years to more than 30 years, prenatal care was mostly not adequate, with a gradual increase in positivity to SARS-CoV-2 that practically turned hospitals into 'COVID hospitals', for treating infected cases up to 100%. Preterm delivery occurred in an average of 15%, and there was preeclampsia in up to 15%, stillbirth up to 3%, cesarean section in 30% in two of the hospitals and 60% in the other three, postpartum hemorrhage in the hospital at altitude, one maternal death and few infected neonates.

The articles published show how COVID-19 infection in pregnant women increased as the pandemic progressed in Lima and Peru. There was only one maternal death. However, in virtual presentations about the Peruvian experience in pregnant women and women in labor, many more maternal deaths have occurred, associated with lower-level hospitals, non-optimal infrastructure, equipment and protocols, and human resources diminished due to age protection and/or presenting comorbidities or infection with COVID-19, with the unfortunate death of some of them (there have been a total of 193 deceased doctors in Peru as of September 29). To all this was added the closure of the first level of care, the absence of prenatal care, restricted mobility of people, insufficient personal protection equipment for health professionals, lack of molecular tests, ICU beds, respirators and oxygen, variable and experimental protocols for critical patient care. And, poverty, malnutrition, anemia, promiscuity, lack of employment, and a long etcetera. It is estimated that at the moment there would be around 40 maternal deaths in Peru.

Vertical transmission of SARS-CoV-2 has not been confirmed. However, and despite reports that children of mothers infected with SARS-CoV-2 rarely suffer from the effects of the virus<sup>(13)</sup>, the published results of certain countries find higher prematurity, stillbirths and placental lesions, as mentioned in the review article presented in this number. We believe that these children born during the pandemic require follow up.

More than a million people have died in the world due to COVID-19. And the numbers continue to rise, with a possible regrowth already underway. Meanwhile, the vaccine -in phase III-, seems it may only be applied to the population on next year 2021.

We need to continue taking care of ourselves so, at the end of the tunnel, we may see what world awaits us.

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