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# Asymptomatic COVID-19 Infection in Pregnancy: Underlying Threat in Refugees' Camps in Greece

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## Abstract

**Background:** This study is to investigate the clinical characteristics of asymptomatic pregnant women COVID-19 infection, evaluate the maternal outcome and identify high risk of transmission in refugees' camps in Greece.

**Cases:** Two asymptomatic pregnant woman, both living in different refugees' camps in Greece, were enrolled in this study. They have been treated by our institution as urgent cases and were given delivery. Clinical data including laboratory test results were collected and reviewed. Diagnosis of COVID-19 infection was made in both cases after delivery based on secondary symptoms. None of the puerperas was administered antiviral therapy. The first puerpera was discharged after two consecutive negative throat swab tests and after 14 days of in hospital quarantine and the second was transferred to referral hospital for COVID-19 two days after delivery.

**Conclusion:** Further concern should be taken into account in order to help effectively refugees' pregnant women during this pandemic, focusing on early detection of the affected cases.

## Introduction

In December 2019, a pneumonia caused by 2019 novel coronavirus (SARS-CoV-2) emerged in Wuhan, Hubei Province ana since an epidemic infection has spread rapidly to different areas of China and other parts of the world [1]. The World Health Organization (WHO) announced SARS-CoV-2 as the cause of pneumonia on January 9, 2020, and declared the virus outbreak a pandemic on March 11, 2020 [2]. The SARS-CoV-2 causes a clinical syndrome designated coronavirus disease 2019 (COVID19) with a spectrum of manifestations ranging from mild upper respiratory tract infection to severe pneumonitis, acute respiratory distress syndrome (ARDS) and death. As of May 5, 2020, more than 2.450.000 cases have been reported worldwide leading to death more than 244000 patients [3].

One of the most important ways of viral transmission is the individuals contact in hospitals, inside families, and other crowded places, especially when infected patients remain asymptomatic [4]. Therefore, specific guidance on infection prevention and control (IPC) strategies when infection with a novel coronavirus (2019-nCoV) is suspected should be followed [5]. Pregnant women are usually considered a high-risk group for viral infections, such as SARS-CoV-2, due to their lowered immune response and the effects of SARS on the fetus [6]. In this study, we reported two cases of asymptomatic pregnant woman with COVID-19, refugees from Cameroun and PR of the Congo.

## Case 1

On March 26, 2020, a 22-year-old female refugee from Cameroun, living at Ritsona refugees' camp, G1P0, who was 38 weeks pregnant according to her last menstrual period, presented at the local regional hospital of Chalkida for a scheduled third trimester visit. During examination she was diagnosed with oligamnios and high blood pressure. She was administered corticosteroids for fetal lung maturation and admitted to University General Hospital of Athens "Alexandra" for further management.

On admission, the physical examination revealed a body temperature of 36.2°C, blood pressure of 155/95 mmHg, pulse of 75 beats per minute, respiratory rate of 16 breaths per minute, and oxygen saturation of 98%. She had no dyspnea, cough or sputum. Other

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laboratory findings included a leukocyte count of 4400*$10^9$/L, neutrophils of 82.1%, lymphocytes of 15.3%, Hct 38.7%, PLTs 161*$10^9$/L, renal and liver biochemistry markers within normal levels. On urinalysis 1(+) of protein was revealed.

She was administered 5 mg of amlodipine and a repeat measurement revealed blood pressure of 132/70 mm Hg. Ultrasonic examination revealed an embryo of 36+2 GA, oligamnios and a grade III maturation placenta. Non stress test revealed good variability on fetal heart rate with acceleration present and no indication of myometrial contractions. The patient was admitted to a ward for further observation.

On Day 2, a second dose of corticosteroids was administered and blood pressured was withheld at normal level after systematic administration of amlodipine. A new ultrasound revealed an embryo at the 5$^{th}$ percentile for the gestational age with redistribution at the MCA. Non stress test was indicating fetal destress with no variability at fetal heart rate.

After a multidisciplinary consultation was performed and informed consent was obtained, an emergency cesarean section under general anesthesia with endotracheal intubation was performed. The type of anesthesia was selected due to spinal anatomic abnormalities of the patient. The operation was performed at standard operating theater and all personnel wore simple surgical masks and gloves. A female infant weighting 2170 gr was delivered uneventfully, with Apgar scores of 8 and 9 at 1 and 5 minutes, respectively. The amniotic fluid was clear, and no gross abnormalities were present on the placenta tissue which was complete. The mother was well and afebrile during the immediate post-operative period. She had no cough or any other discomfort such as diarrhea, nausea and vomiting. Her vital signs were stable with blood oxygen saturation of 99% and she was admitted to a ward with 4 more women. The newborn remained with his mother from postpartum day 1 and was breastfed.

On postpartum day 2, the mother complained about sore throat and mild cough. She had a body temperature of 37.2 °C, blood pressure 125/76 mmHg, pulse of 90 beats per minute, respiratory rate of 19 breaths per minute, and oxygen saturation of 97%. A chest x-ray was performed and no abnormal findings were noticed. Laboratory findings included a leukocyte count of 6800*$10^9$/L, neutrophils of 90.2%, lymphocytes of 8.1%, Hct 33.6%, PLTs 169*$10^9$/L. Since she was three days in hospital according to protocol, she was transferred to another ward in a single room, the newborn was transferred to isolation, and a nasopharyngeal swab sample for SARS-CoV-2 nucleic acid was taken from both the mother and the infant. The results came back the day after and were positive for the mother and negative for the infant. Given the results, the mother remained in isolation for 14 days, with no contact with the newborn who was fed by formula thereafter.

After consultation from the department of infectious diseases, a second nasopharyngeal swab sample of the mother and the infant were taken on postpartum day 4. Since the mother showed no clinical signs of infection no antiviral treatment was administered. The results came back again positive for the mother and negative for the infant. During their rest hospitalization, the mother remained stable, with no fever and sore throat and cough were in remission since postpartum Day 6. After two consecutive negative results on nasopharyngeal swab samples of the mother on postpartum Days 13 and 15 and a negative result on nasopharyngeal swab sample of the infant on postpartum Day 15, they were both discharged on Day 16 and returned at refugees' camp at Ritsona.

## Case 2

On May 8, 2020, a 27-year-old female refugee from People's Republic of Congo, G3P2, who was 39+5 weeks pregnant according to her last menstrual period, presented at admission ward referring uterine contractions.

On admission, the physical examination revealed a body temperature of 36.2°C, blood pressure of 200/100 mmHg, pulse of 89 beats per minute, respiratory rate of 14 breaths per minute, and oxygen saturation of 98%. She had no clinical signs of respiratory bacterial or viral infection. Other laboratory findings included a leukocyte count of 6800*$10^9$/L, neutrophils of 78.0%, lymphocytes of 18.3%, Hct 34.9%, PLTs 263*$10^9$/L, renal and liver biochemistry markers within normal levels. On urinalysis 3(+++) of protein was revealed.

She was administered 5 mg of amlodipine and 10 mg of nifedipine and a repeat measurement after 20 minutes revealed blood pressure of 185/115 mm Hg. Ultrasonic examination revealed an embryo of 37 GA, oligamnios and a grade III maturation placenta. Non stress test revealed good variability on fetal heart rate with acceleration present and moderate myometrial contractions. The patient was admitted to a ward for further observation. Repeated measurements of blood pressure every 15 minutes did not reveal normal blood pressure levels.

After a multidisciplinary consultation was performed and informed consent was obtained, an emergency cesarean section under spinal anesthesia was performed. The operation was performed at standard operating theater and all personnel wore simple surgical masks and gloves. A male infant weighting 3080 gr was delivered uneventfully, with Apgar scores of 8 and 9 at 1 and 5 minutes, respectively. The amniotic fluid was clear, and no gross abnormalities were present on the placenta tissue which was complete. The mother was well and afebrile during the immediate post-operative period. Her vital signs were stable with blood oxygen saturation of 99% and she was admitted to ACU. In ACU a nasopharyngeal swab sample for Sars-CoV-19 was obtained.

On postpartum Day 1, during the morning visit, vital signs were stable, blood pressure levels were 150/90 mm Hg, pulse of 72 beats per minute, oxygen saturation of 99% and the result came back positive for Sars-CoV-19. Full blood count revealed leukocyte count of 10500*$10^9$/L, neutrophils of 84.4%, lymphocytes of 9.9%, Hct 33.1%, PLTs 213*$10^9$/L and renal and liver biochemistry markers remained within normal levels. As of April 1, 2020 our hospital was not included in the network of referral hospitals for COVID-19 in Athens, the patient was transferred to a referral hospital, in stable condition for further management.

## Discussion

We herein reported two cases of asymptomatic pregnant women in Athens Greece who were diagnosed with COVID-19 after labor. Women who arrive at the labor ward must be stratified, based on local case definitions, into low, moderate, or high risk for COVID-19 infection, to determine the disposition of the patient and type of infection control precautions required of the healthcare staff care [7]. They had no fever, cough, or dyspnea, and blood routine examination showed normal white blood cell count and normal lymphocyte count preoperatively. As a consequence, no special protective measures were taken, and labor was completed in standard operating theater. Importantly, their care prior to COVID-19 diagnosis involved exposures to multiple health care workers and puerperants, all of whom lacked appropriate PPE. All of health workers were placed in home isolation for 7 days after the initial diagnosis and none showed symptoms of COVID-19 infection. Puerperants were also quarantined with no signs of infection.

It is reasonable to suspect that asymptomatic COVID-19 presentations are common and represent a substantial contribution to disease spread [8]. It seems that asymptomatic infection could be detected at every age, although it was frequent at younger ages [9]. Person-to-person transmission occurs primarily via direct contact or through droplets spread by coughing or sneezing from an infected individual.

During 2019, Greece was the country with by far the most immigrants' and refugees' inflows, with numbers measuring more than 100.000 persons of all ages according to IOM [10]. As, these

numbers are continuously growing, tens of thousands of migrants live in densely packed camps. In Lesvos island in Moria camps, for instance, there were 38,000 refugees living on 6200 square meters [11]. It is easily understood that people held in detention centers are easily affected. These are often run well beyond capacity and in suboptimal conditions, including lack of basic infrastructure or hygiene, making them a high-risk environment for coronavirus spread [12]. This global public health emergency highlights the exclusion and multiple barriers to health care that are faced by migrants and refugees, among whom COVID-19 threatens to have rapid and devastating effects [13].

It is important to notice, that the first case that we refer, was also the first Sars-Cov-19 patient living in Ritsona refugees' camp. After the first result came back positive, local control disease center, run Sars-CoV-19 tests on all refugees and personnel in the camp and 50 more refugees were revealed to be infected and placed in quarantine. As of April 2020, there have been reported COVID-19 cases in three refugees' camps on mainland Greece and started quarantine for two weeks. However, physical distancing and improving hand hygiene are not feasible in these places. Since suspected cases are going to be referred to hospitals, more strict rules in categorizing these patients based on their social history should be enforced. Recently a specific questionnaire at obstetrics admission was published, which was used for systematic screening in Italy [14]. In our opinion, given migrants' specific social features and living conditions, this questionnaire should be supplemented with more questions that would focus on the aspects above. For example information about their living in refugees' camp, the number of people they are living together, their access to fresh clean water and personal hygiene products, their ability to refer to a doctor when encountering a health problem and their access to translation services, could provide health care workers with crucial information and help us categorize these patient as low or high-risk for COVID-19.

COVID-19 crosses all borders and spreads fast. Everyone may be affected, and it is certain that neither health care workers, nor refugees and migrants will be left untouched by this pandemic. Therefore, effective risk stratification models should be established in our daily practice, sufficiency of PPEs should be ensured in all health infrastructures and active measures should be taken in order to protect all living in refugees' camps, so those that are most marginalised will not be left behind.

## References

1. Zhu N, Zhang D, Wang W, Li X, Yang B, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. N Engl J Med. 2020 Feb;382(8):727-733.
2. WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020.
3. World Health Organization.
4. Rothan HA, Byrareddy SN. The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. J Autoimmun. 2020 May;109:102433.
5. WHO/2019-nCoV/IPC/2020.3
6. Warning JC, McCracken SA, Morris JM. A balancing act: Mechanisms by which the fetus avoids rejection by the maternal immune system. Reproduction. 2011 Jun;141:715-24.
7. Dashraath P, Wong J, Lim M, Lim L, Li S, et al. Coronavirus disease 2019 (COVID-19) pandemic and pregnancy. American journal of obstetrics and gynecology. S0002-9378(20)30343-4. Advance online publication. Am J Obstet Gynecol. 2020 Jun;222(6):521-531.
8. Bai Y, Yao L, Wei T, Tian F, Jin DY, et al. Presumed asymptomatic carrier transmission of COVID-19. JAMA. 2020 Feb 21;323(14):1406-1407.
9. Hu Z, Song C, Xu C, Jin G, Chen Y, et al. Clinical characteristics of 24 asymptomatic infections with COVID-19 screened among close contacts in Nanjing, China. Sci China Life Sci. 2020 May;63(5):70.
10. Mediterranean Migrant Arrivals Reach 106,711 in 2019; Deaths Reach 1,246.
11. AFP. Estado de Minas Gerais, Internacional, 2020. Campo de refugiados grego de moria, uma "bomba" em tempos de coronavírus.
12. Hargreaves S., Kumar BN, McKee M, Jones L, Veizis A. Europe's migrant containment policies threaten the response to covid-19. BMJ (Clinical research ed.), 368, m1213. (2020).
13. Abubakar I, Aldridge RW, Devakumar D, Orcutt M, Burns R, et al. The UCL–Lancet Commission on Migration and Health: the health of a world on the move. Lancet 2018 Dec;392:2606–2654.
14. Tassis B, Lunghi G, FrattaruoloMP, Ruggiero M, Somigliana E, et al. (2020). Effectiveness of a COVID-19 screening questionnaire for pregnant women at admission to an obstetric unit in Milan. Int J Gynaecol Obstet. 2020 Jul;150(1):124-126.