

Re: Coronavirus disease 2019 and pregnancy is déjà vu all over again

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Letter to the Editor

Re: Coronavirus disease 2019 and pregnancy is déjà vu all over again

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Short Title: Exclude fetal hypoxia in the COVID-19 pandemic

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Re: Coronavirus disease 2019 and pregnancy is déjà vu all over again

Abstract

We read with great interest the article entitled “Coronavirus disease 2019 and pregnancy is déjà vu all over again” by Rasmussen and Jamieson. Authors call for a more thorough study of the impact of coronavirus infection on pregnant women and obstetric service providers, as well as the impact of vaccination on pregnancy and fetal health, in order to develop recommendations for preventing the next pandemic. To develop informed solutions, the authors correctly recommend hiring more providers of obstetric services with in-depth knowledge in the field of epidemiology, infectious diseases, public health, as well as knowledge of issues related to the care of pregnant women. We agree with this and would like to add the following. COVID-19 is characterized by the development of atypical pneumonia, which in a severe stage is complicated by

respiratory obstruction, causing maternal and fetal hypoxia. At the same time, there is no alternative to oxygen lung ventilation to increase blood oxygenation in the mother and fetus today. Thus, obstetricians must necessarily be involved in the development of measures to combat the next pandemic, so that we can prevent coronavirus infection of a pregnant woman and preserve the fetus in the womb. Relevant healthcare institutions should recognize that COVID-19 increases the risk of fetal intrauterine hypoxia. Therefore, it is urgently necessary to improve the technology of artificial lung ventilation in a pregnant woman in order to exclude hypoxic brain damage in her fetus.

Keywords: Pregnant woman; Respiratory obstruction; Fetus; Fetal hypoxia; Oxygen; Lung ventilation; Blood oxygenation.

Sir,

With immense interest we read the article entitled, ‘Coronavirus disease 2019 and pregnancy is déjà vu all over again’ by Rasmussen and Jamieson.¹ The article briefly describes the problems that were identified in pregnant women and obstetric service providers during the COVID-19 pandemic. The authors point to the insufficient attention of health authorities to these problems. In this regard, they call for a more thorough study of the impact of coronavirus infection on pregnant women and on providers of obstetric services, as well as the impact of vaccination on the course of pregnancy and fetal health, in order to develop recommendations for the prevention of the next pandemic. To develop informed solutions, the authors correctly recommend hiring more providers of obstetric services with in-depth knowledge in the field of epidemiology, infectious diseases, public health, as well as knowledge of issues related to the care of pregnant women.¹

We would like to thank the authors for their insightful comment. The article sheds light on the main obstetric problems associated with the prevention of COVID-19 in pregnant women. But the article does not address the problem associated with fetal hypoxia in the case of respiratory obstruction in the mother.

The COVID-19 pandemic has shown that in adults, including pregnant women, this disease is characterized by the development of atypical pneumonia, which in a severe stage is complicated by respiratory obstruction and hypoxia.^{2,3} This is why COVID-19 increases the risk of fetal intrauterine hypoxia during pregnancy. Fetal hypoxia is most dangerous in the second half of pregnancy. The fact is that during this period, with an increase in the duration of pregnancy, the fetal brain begins to require more and more oxygen. Studies show that today only forced ventilation of the lungs with oxygen and extracorporeal membrane oxygenation (ECMO) can normalize the mother’s blood oxygenation in case of airway obstruction. But traditional lung ventilation technology does not always provide oxygen delivery to the alveoli and oxygen absorption into the blood, and ECMO is a very expensive, inaccessible and dangerous blood oxygenation technology. In this regard, it is concluded that today there is no alternative to increasing blood oxygenation due to effective lung ventilation. It is proposed to increase the efficiency of lung venation by inhaling gaseous oxygen in combination with an aerosol of alkaline hydrogen peroxide.⁴ It has been shown that intra-respiratory hydrogen peroxide increases the efficiency of forced ventilation of the lungs due to the immediate dissolution of mucus and pus in the respiratory tract with their simultaneous transformation into oxygen foam.

Thus, obstetricians must necessarily be involved in the development of measures to combat the next pandemic, so that we can prevent coronavirus infection of a pregnant woman and preserve the fetus in the womb. Relevant healthcare institutions should recognize that COVID-19 increases the risk of fetal intrauterine hypoxia. Therefore, it is urgently necessary to improve the technology of artificial lung ventilation in a pregnant woman in order to exclude hypoxic brain damage in her fetus.

Disclosure of interests

The authors have no relevant conflicts of interests. Completed disclosure of interests form is available to view online as supporting information.

Contribution to authorship

NAU and ALU contributed equally to authoring this manuscript.

Details of ethics approval

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