



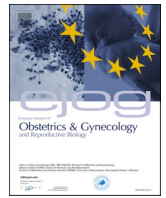
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Short communication



A case of temporary anhydramnios after COVID-19 infection

Dear Editor,

The novel coronavirus disease 2019 (COVID-19) has been associated with adverse perinatal outcomes, including maternal death, intrauterine fetal demise, and maternal depression [1]. In our previous report, COVID-19 had some effects on perinatal outcomes (e.g., hypertensive disorder of pregnancy and preterm labor) by changing mothers' behavior [2]. The incidence of fetal growth restriction (FGR) and oligohydramnios in mothers with COVID-19 was similar to that in non-infectious mothers [3]. However, a case of oligohydramnios without FGR during a COVID-19 infection was reported [4]. Herein, we describe a case of temporary anhydramnios after a COVID-19 infection.

A 38-year-old pregnant woman (gravida 2, para 1) visited our hospital at 25 gestational weeks due to anhydramnios and FGR. She conceived by in vitro fertilization and embryo transfer and was infected with COVID-19 at 23 gestational weeks. She did not use any medications (e.g., non-steroidal anti-inflammatory drugs and antibiotics) while

having fever for 2 days during the COVID-19 infection, and she rested at home. At the first visit to our hospital, amniotic fluid was not detected on transabdominal ultrasound (maximum vertical pocket, 0 mm; amniotic fluid index, 0 cm). The fetal stomach and bilateral kidneys were detected, but the fetal bladder was not. The fetus had FGR (624 g, -1.9 standard deviation). A premature rupture of the membrane had not occurred. We checked the fetus and volume of amniotic fluid twice a week. During pregnancy, the amniotic fluid and fetal growth increased without any treatment. At 38 weeks and 5 days of gestation, she delivered a girl weighing 2754 g vaginally. The placenta had a $18 \times 3 \times 4$ -cm disc, with extraplacental membranes and three-vessel umbilical cord. Grossly, the neonatal surface of the placenta had some white plaques (Fig. 1a). The maternal surface of the placenta showed a firm surface with patchy yellow discoloration (Fig. 1b). Cut surfaces of the disc had intervillous thrombosis and multiple infarctions (Fig. 1c). On histology, some of the infarctions reached the maternal surface. No significant

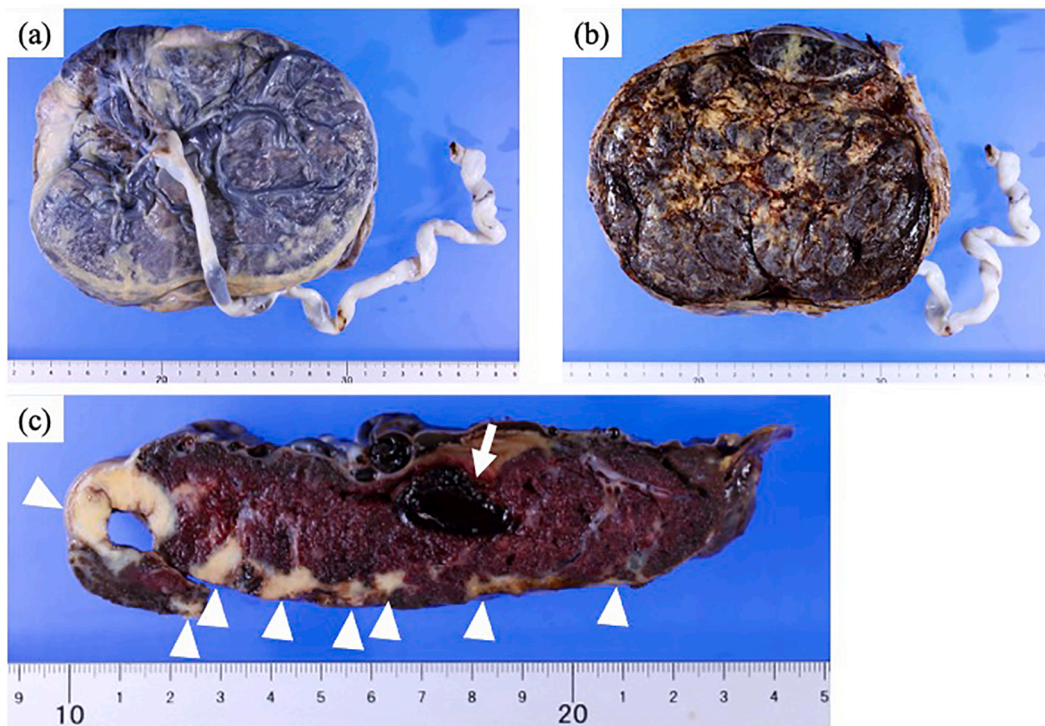


Fig. 1. Gross view and pathologic findings of the placenta. (a) Gross appearance of the neonatal surface of the placenta showing some white plaques. (b) Gross appearance of the maternal surface of the placenta showing a firm surface with a patchy yellow discoloration. (c) Cut surfaces of the disc had intervillous thrombosis (arrow) and multiple infarctions (arrow head).

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change was observed in the decidual arteries.

It is still unknown as to why the patient developed temporary anhydramnios. In previous reports describing the association between oligohydramnios and COVID-19, there is little information about placenta and fetal growth [3,4]. In addition, since the previous cases were not cared for over the long term because of the choice of termination, it is still unknown whether oligohydramnios is temporary or not. While the association between anhydramnios and COVID-19 remains unknown, clinicians should pay attention to fetal growth and well-being, when anhydramnios is detected in pregnant women with COVID-19.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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