

Evaluation of amniotic fluid disorders in pregnant women with Covid-19 in Ardabil in 2020-22

Abstract

Background: During the Covid-19 pandemic, pregnant women were among the vulnerable groups against this disease. Evidence shows that covid-19 increases the likelihood of adverse pregnancy outcomes, however, many of the effects of this disease during pregnancy have not been sufficiently studied.

Aim: To evaluate the amniotic fluid disorders in pregnant women with Covid-19 in Ardabil in 2020-22.

Materials and methods: The present study was a cross-sectional descriptive analytical study that was conducted on 207 pregnant women referred to Alavi Hospital in Ardabil who were confirmed to be infected with Covid-19. The required information from the patients was determined through interviews, examinations, studying the hospital records, and examining the results of the tests and recorded in the information forms as follows: (a) Demographic and basic information of the patients: age of the mother, number of previous pregnancies, number of previous births ; (b) Information related to the Covid-19 disease: gestational age at the time of infection, clinical symptoms, lung involvement, severity of the disease, need for hospitalization, need for special care (c) Amniotic fluid disorders: polyhydramnios and oligohydramnios ; and (d) pregnancy outcome: miscarriage, preterm delivery, cesarean delivery.

Results: The average age of the patients was 28.3 ± 6.5 years. 8 patients (3.9 percent) were infected with Covid-19 in the first trimester, 98 patients (47.3 percent) in the second trimester, and 101 patients (48.8 percent) in the third trimester. The severity of the disease was mild in 100 patients (48.3%), moderate in 84 patients (40.6%), and severe in 23 patients (11.1%). 7 patients (3.4%) were admitted to the intensive care unit. 19 pregnant women (9.2 percent) with covid-19 had amniotic fluid disorder, which type was oligohydramnios in all of them. oligohydramnios had a significant relationship with the trimester of being infected with Covid-19 ($P=0.007$), shortness of breath ($P=0.004$), pulmonary involvement ($P=0.027$), disease severity ($P<0.001$), hospitalization ward ($P<0.001$), cesarean

delivery ($P=0.021$), and preterm birth ($P<0.001$), but it was not related to age, body mass index, underlying disease, gravidity, and parity ($P>0.05$).

Conclusion: The results of the present study showed a 9.2% incidence of oligohydramnios in pregnant women with covid-19. The incidence of oligohydramnios was significantly higher in women who had been diagnosed with Covid-19 in the third trimester of pregnancy, women who had shortness of breath, women who had pulmonary involvement, women who had severe Covid-19, and women who were hospitalized in the intensive care unit. On the other hand, the rate of cesarean delivery and preterm birth was significantly higher in women with oligohydramnios.

Keywords: Pregnancy, Covid 19, Amniotic fluid.