

opinion for pregnant and non-pregnant RDs subjects, clinicians should promote adherence to therapy until specific studies are reported.<sup>1</sup> In fact, in cases of discontinuation of therapy during pregnancy in RDs patients, a flare of disease can prompt an increase of pro-inflammatory cytokines that may theoretically worsen maternal and pregnancy outcomes in case of SARS-CoV-2 infection. Furthermore, some anti-rheumatic drugs were proposed as a potential treatment for SARS-CoV-2 infection (namely hydroxychloroquine), although larger studies do not support this evidence.<sup>5</sup> Because of this, a shortage of hydroxychloroquine was experienced in some countries, leaving RDs patients abruptly without drug access<sup>6</sup>; this might represent a critical aspect in pregnancy management. Therefore, it seems clear that further studies are warranted in this subset of RDs patients in terms of risk assessment, pregnancy outcomes, and disease control.

#### AUTHOR CONTRIBUTIONS

All three authors conceived and wrote the manuscript. MS took the lead in writing the manuscript; CS and EP provided relevant critical feedback.

#### CONFLICTS OF INTEREST

The authors have no conflicts of interest.

#### REFERENCES

1. Favalli EG, Ingegnoli F, De Lucia O, Cincinelli G, Cimaz R, Caporali R. COVID-19 infection and rheumatoid arthritis: Faraway, so close!. *Autoimmun Rev*. 2020;19:102523.
2. Giles I, Yee CS, Gordon C. Stratifying management of rheumatic disease for pregnancy and breastfeeding. *Nat Rev Rheumatol*. 2019;15:391–402.
3. Mehta P, McAuley DF, Brown M, et al. COVID-19: consider cytokine storm syndromes and immunosuppression. *Lancet*. 2020;395:1033–1034.
4. Della Gatta AN, Rizzo R, Pilu G, Simonazzi G. COVID19 during pregnancy: a systematic review of reported cases. *Am J Obstet Gynecol*. 2020; <https://doi.org/10.1016/j.ajog.2020.04.013>. [Epub ahead of print].
5. Tang W, Cao Z, Han M. Hydroxychloroquine in patients with mainly mild to moderate coronavirus disease 2019: Open label, randomised controlled trial. *BMJ*. 2020;369:m1849.
6. Mendel A, Bernatsky S, Thorne JC, Lacaille D, Johnson SR, Vinet É. Hydroxychloroquine shortages during the COVID-19 pandemic. *Ann Rheum Dis*. 2020; <https://doi.org/10.1136/annrheumdis-2020-217835> [Epub ahead of print].

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#### Obstetrics

## Abdominal pregnancy during the COVID-19 pandemic

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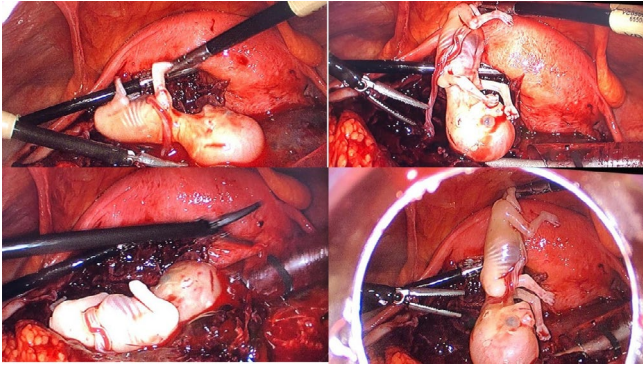
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Abdominal pregnancy is a rare type of ectopic pregnancy with an incidence of 1:10 000 to 1:30 000 women.<sup>1</sup> Several different locations have been reported, including the pouch of Douglas, pelvic sidewall, bowel, broad ligament, omentum, and spleen.<sup>2,3</sup> Most abdominal pregnancies are diagnosed after presenting with various complications; however, in a few cases it may remain asymptomatic and is rarely established before surgery.<sup>4</sup> Institutional Review Board approval was not required for this case report; written informed consent was obtained.

A 33-year-old primigravida presented at 14 weeks of pregnancy with persistent abdominal pain lasting 15 days. The patient had not attended hospital sooner for fear of coronavirus disease 2019 (COVID-19) infection. The patient's history was unremarkable. On admission, hemoglobin serum level was 6 g/dL, blood pressure was 80/50 mm Hg, and serum beta-hCG level was 88 000 IU/L. The patient's lower abdomen was significantly tender at palpation. Ultrasonography revealed an empty uterus; however, a fetus with cardiac activity was evident posterior to the uterus between the intestinal



**FIGURE 1** Fetus located behind the posterior wall of the uterus, close to the rectosigmoid junction.

loops. Massive blood clots appeared to be present in the pouch of Douglas. The patient was hospitalized at Leopoldo Mandic hospital.

Laparoscopy was performed and around 2000 mL of blood was drained. The fetus was located behind the posterior wall of the uterus, close to the rectosigmoid junction (Fig. 1). The placental tissue was strictly adherent to the sigmoid mesocolon, pouch of Douglas, perimetrium and left adnexa. Decidual tissue could not be removed completely. Owing to neovascularization invading the sigmoid mesocolon and omental vessels, a delicate approach with forceps and bipolar scissors caused significant blood loss and a drain was placed. Three units of packed red blood cells and one unit of plasma were transfused. Postoperative methotrexate was given to treat incomplete resection of the decidual tissue.

Given the risk of COVID-19 infection, the patient underwent chest X-ray and nasopharyngeal swab before surgery. As both test results were negative, the patient received 50 mg/m<sup>2</sup> methotrexate intramuscularly within 24 hours after surgery. The patient was discharged after 3 days (serum beta-hCG 2900 IU/L). Serum beta-hCG had decreased to less than 5 IU/L at 21 days. No residual lesion was detected with ultrasonography at the 6-week follow-up.

In general, image magnification during laparoscopy allows complete removal of placental cotyledons from the peritoneal surface, thereby avoiding possible postoperative bleeding, infection, and sepsis resulting from retention of placental remnants. However, given the tenaciously adherent decidual tissue in the present case and the negative test result for COVID-19, the patient was managed with methotrexate rather than removing all of the placenta, with the aim of preventing possible complications of infection during the pandemic, when availability of operating rooms and packed red blood cells was limited.

#### AUTHOR CONTRIBUTIONS

GRD was responsible for conception of the study and writing the manuscript. AB was responsible for performing the surgery and data collection. GDB was responsible for the surgery, case management, literature review, and reviewing the manuscript. FA revised the manuscript. FA wrote also the paper and make photos.

#### CONFLICTS OF INTEREST

The authors have no conflicts of interest.

#### REFERENCES

1. Yoder N, Tal R, Martin JR. Abdominal ectopic pregnancy after in vitro fertilization and single embryo transfer: A case report and systematic review. *Reprod Biol Endocrinol*. 2016;14:69.
2. Cosentino F, Rossitto C, Turco L, et al. Laparoscopic management of abdominal pregnancy. *J Minim Invasive Gynecol*. 2017;24:724–725.
3. Hailu FG, Yihunie GT, Essa AA, Tsega WK. Advanced abdominal pregnancy, with live fetus and severe preeclampsia: Case report. *BMC Pregnancy Childbirth*. 2017;17:243.
4. Rahaman J, Berkowitz R, Mitty H, Gaddipati S, Brown B, Nezhat F. Minimally invasive management of advanced abdominal pregnancy. *Obstet Gynecol*. 2004;103:1064–1068.