

Necrotizing enterocolitis complicated in the pregnant patient with SARS-CoV-2 infection

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Backgrounds

Accumulating experience demonstrated that SARS-CoV-2 infection in pregnancy is an increased risk of the disease severity and mortality because of complications related to COVID-19.

Clinical manifestation in pregnant patients varied by each trimester of presentation. Most of them are morbidities in the respiratory organ system and systemic illness. However, gastrointestinal diseases caused by this viral infection have been rarely reported in pregnant women, even without history of IBD.

Case

A 36-year-old Korean woman (gravida 2, parity 1) at 30 and 3/7 weeks of pregnancy was referred to our center with the complaint of abdominal pain on the left side and suspicion of preterm labor. Her medical history was unremarkable, except for the recent treatment for confirmation of COVID-19 infection 5 weeks ago. She initially presented myalgia, fever, and chills, and was diagnosed by PCR test. During the acute period, respiratory symptoms and diarrhea were severe and she was managed in an outpatient setting with antibiotics, anti-inflammatory agents, and mucolytics.

Upon admission, the patient was found fully conscious, ill with a low-grade fever of 37.8 °C, tachypnea (respiratory rate 24/min), increased heart rate (110/min) with normal blood pressure (110/70mmHg). Fetal cardiotocography demonstrated a fetal heart rate of 150 bpm with moderate variability. Uterine contractions were at 2-3-min intervals with moderate intensity. Ultrasound showed a viable fetus with an estimated gestational age of 31 weeks, AFI of 10, and posterior placenta. Based on abnormal laboratory results (figure 2) and the clinical manifestation, clinical chorioamnionitis was diagnosed, and broad intravenous (IV) ceftriaxone (2 g/every 24 h), IV metronidazole (500 mg/every 8 h), and oral

Figure 1

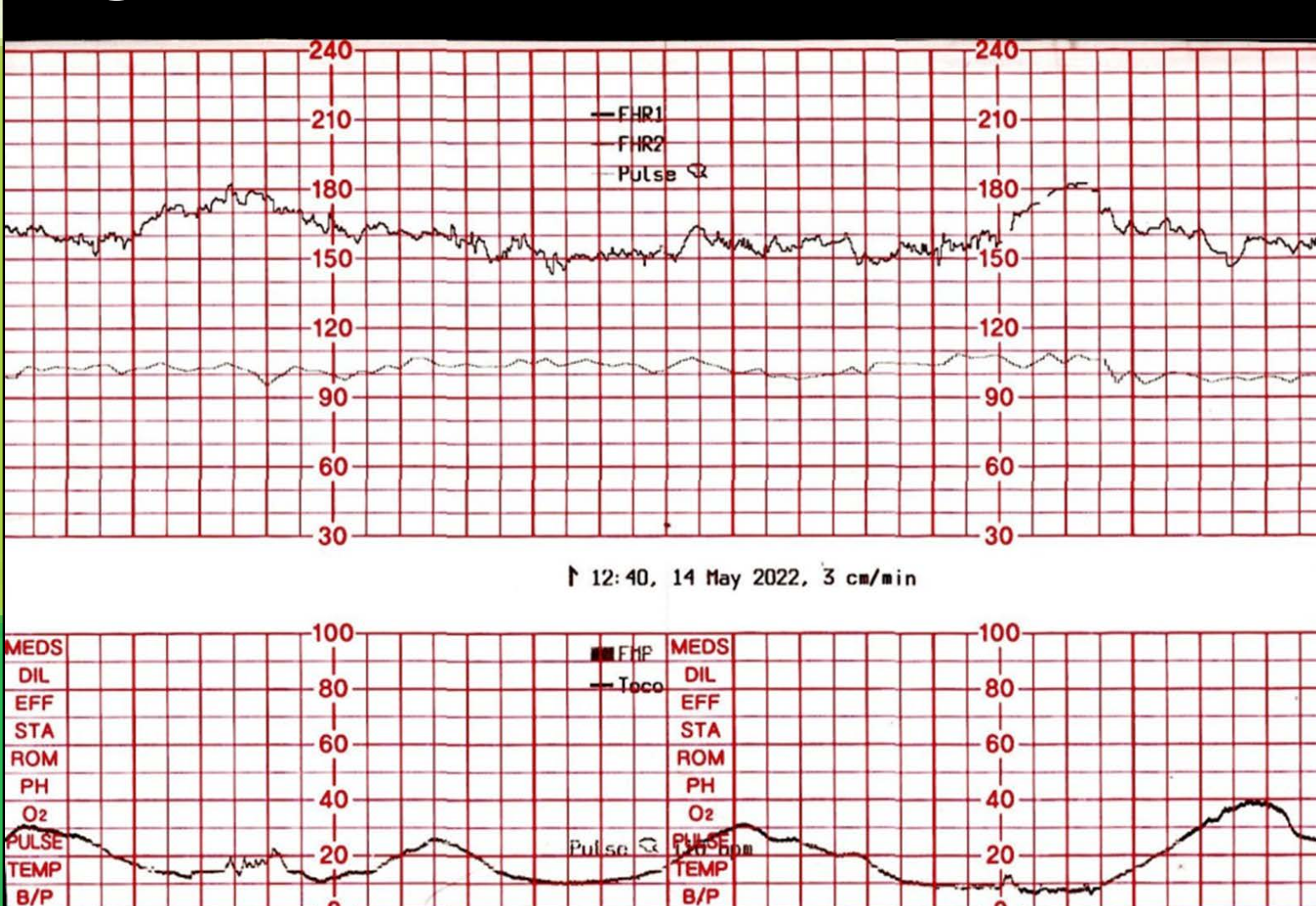


Figure 2

Test	Initial	PPD2	PPD3
Routine CBC & WBC Diff. Count			
WBC (4.0-10.0)	18.06	21.15	17.19
RBC (4.5-5.0)	3.16	2.76	2.82
Hemoglobin (12.0~16.0)	8.7	7.6	7.7
Platelet count (150-450)	604	542	610
WBC Diff. Count			
Seg.-neutrophils	88.6	93.9	86.9
Lymphocytes	6.9	3.9	6.5
Monocytes	4	1.7	4
CRP, quan.(<0.5)	5.66	8.58	16.88

Figure 1 Electronic fetal monitoring

Figure 2 laboratory results at initial & postpartum.

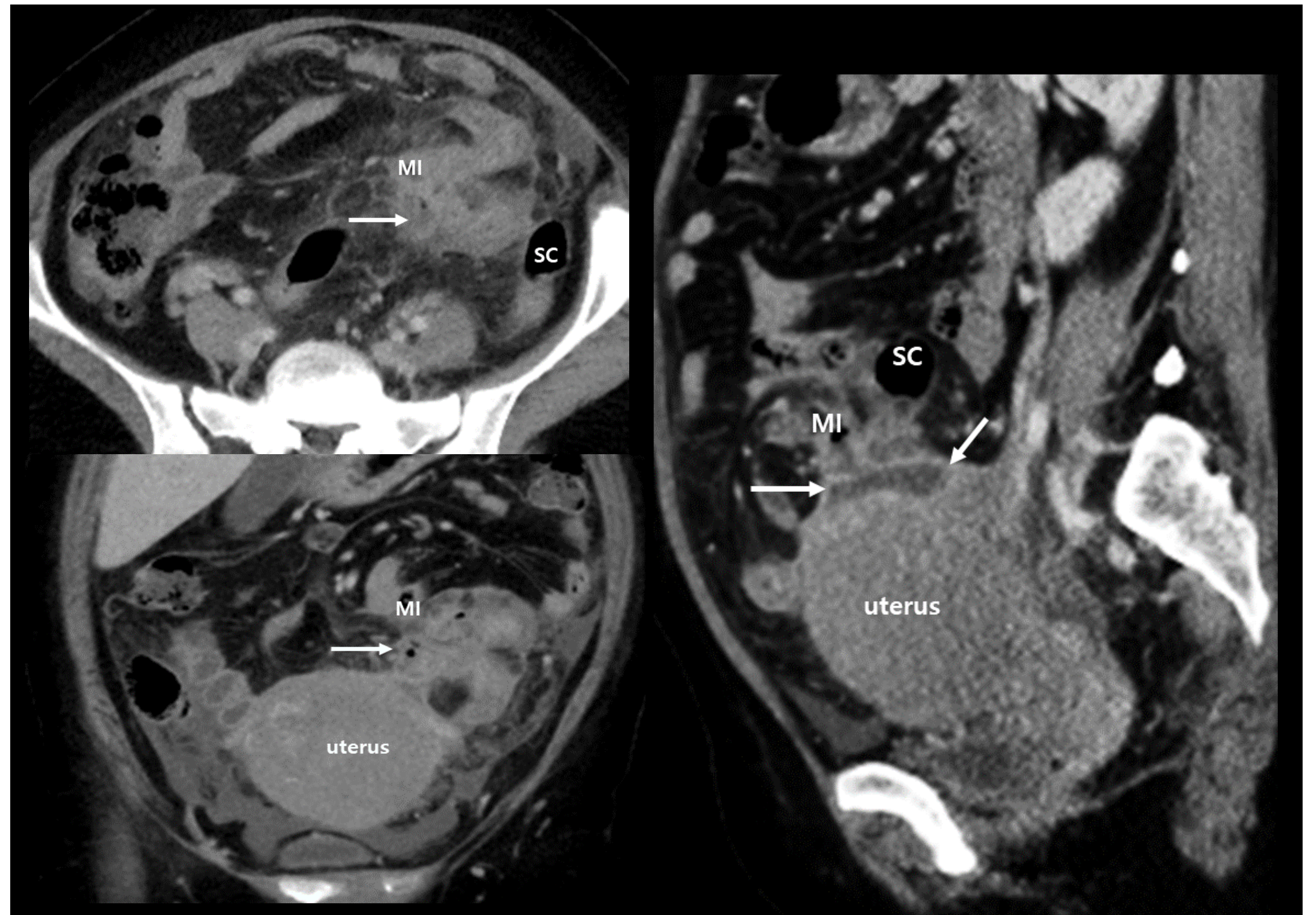


Figure 3 The computed tomogram of abdomen

1. Segmental wall thickening in several mid ileal (MI) loops with interlopal space abscess (arrows) and around the fundus ; segmental wall thickening in the sigmoid colon (SC)
2. Involuting state of uterus : Hyperemia below the interlopal abscess (arrows)

clarithromycin (500 mg/every 8 h). Her labor progressed and she vaginally delivered a male fetus at 30 weeks and 4/7 days of gestation with a 1min and 5min Apgar score of 5 and 7, respectively. Despite continuing the antibiotics, the laboratory findings got worse (Figure 2). We performed a computed tomogram (CT) to confirm the diagnosis and which showed severe enteritis and abscess of the mid-ileum and sigmoid colon around the uterus (figure3). She transferred to the department of surgery and was conservatively treated with antibiotics. Initial microbiologic test at her cervicovaginal discharge, placenta, and maternal blood was all negative. The colonoscopy examined as a follow-up study found multiple inflammatory polyps in the sigmoid colon and biopsy was done. Pathologic report diagnosed chronic inflammation with the lymphoid follicle. She was discharged on the hospital day 15 without any event.

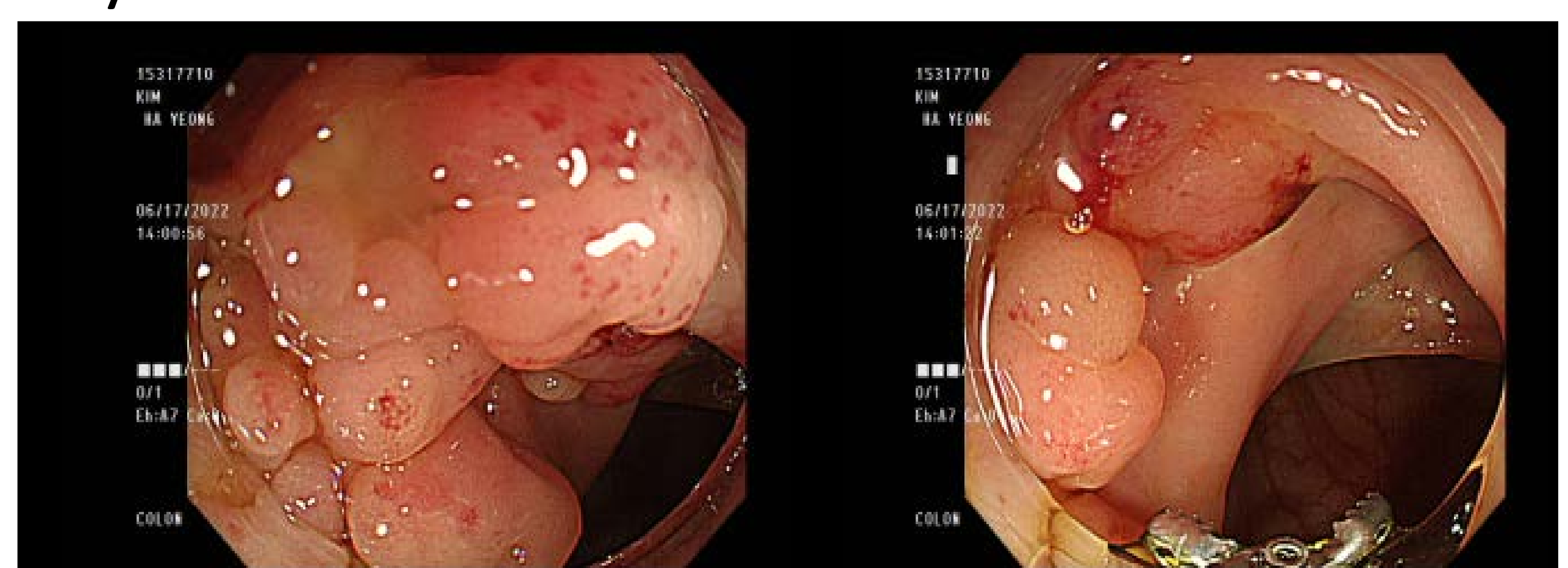


Figure 4. Colonoscopy

The multiple inflammatory polyps were found in the sigmoid colon above 35 cm from anal verge and multiple biopsy was done.

Conclusion

Enteritis caused by SARS-CoV-2 infection in pregnant women can be misdiagnosed as clinical chorioamnionitis, especially in late pregnant period. Clinicians should establish treatment policies by referring to the patient's history of Covid-19.