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Laparoscopic Management of Chronic Ectopic Pregnancy During The First Peak of COVID-19 Pandemic

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Article Highlights

- Covid-19 pandemic has adversely affected the health of the population including pregnant women.
- Covid-19 does not increase the risk of early pregnancy loss or ectopic pregnancy.
- Therate of ruptured ectopic pregnancy has increased during the pandemic.
- More conservative and medical approach has been used for ectopic pregnancy during the pandemic.
- Chronic ectopic pregnancy despite its rare, may increase during the pandemic which can safely be managed with minimal invasive surgery.

Abstract

COVID-19 pandemic has affected the health and wellbeing of the population globally. Pregnant women are not an exception. Ectopic pregnancy is considered one of the serious causes of maternal mortality if left untreated. The pandemic has resulted in women avoiding hospital visits due to worriesabout becoming infected with the virus. This might have led to the increase in cases of late presentation and ruptured ectopic pregnancy. We report a case of a young lady in her first pregnancy. She presents at 10 weeks gestation with chronic ectopic pregnancy (CEP) during the first peak of the COVID-19 pandemic. She was unwell with a picture mimicking pelvic abscess. She recovered well following laparoscopic salpingectomy.

Keywords

Ectopic pregnancy, Chronic, Covid-19

Background

SARS-COV-2 is a strain of corona virus which causes COVID-19. Most global cases have been identified to have human to human transmission via respiratory droplets by close contacts with an infected person or from contaminated surfaces [1]. Pregnant women do not appear more likely to contract the infection than the general population [1-3]. Severe illness appears to be more common in later pregnancy [3].

There are currently no data suggesting an increased risk of miscarriage or early pregnancy loss in relation to COVID-19 [3]. The RCOG has encouraged women who experience symptoms of pelvic pain and/or bleeding during early pregnancy to contact healthcare professionals straight away [1].

An analysis from North Italy reported that there was an increased rate of ruptured ectopic pregnancy identified in COVID-19 pandemic [4]. This has raised serious concerns regarding the potential serious consequences of the COVID-19 pandemic in women of reproductive age. This could have been due to women reluctance to seek medical advice or reduction of early pregnancy scans. Similar findings were reported recently from Israel, indicating an increase rate of ruptured tubal ectopic pregnancy during the COVID-19 pandemic compared to cases of tubal ectopic pregnancy before the pandemic [5].

Alteration of local early pregnancy guidelines during the pandemic has encouraged

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conservative management for women with suspected ectopic pregnancy whenever possible in addition to single dose methotrexate treatment[6]. The Royal College of Obstetricians and Gynaecologists in the UK has recommended surgical management of ectopic pregnancy during the coronavirus pandemic only to be considered following senior review of the ultrasound scan, beta-hCG and clinical findings and if no other management option is safely feasible [6]. It has also been reported that in women who have tested positive for COVID-19 infection, care should be considered in deciding medical or surgical management of ectopic pregnancy as methotrexate may potentially cause immunosuppression and worsens COVID-19 infection. Laparoscopy with appropriate surgical intervention using personal protective equipment remains a reasonable minimally invasive approach for treating an ectopic pregnancy case who is positive for COVID-19 [7].A multicentre observational study conducted in the UK comparing outcomes from a pre-pandemic cohort of ectopic pregnancy cases to a prospective cohort during the pandemic, showed that women with ectopic pregnancy were undergoing significantly higher rates of non-surgical management during the first wave of the COVID-19 pandemic with fewer hospital attendances with no increase in complications [8].

We present a case of chronic ectopic pregnancy (CEP) during the first COVID-19 pandemic peak.

A 25-year-old lady presented with 10 weeks amenorrhoea and 3 weeks history of mild vaginal bleeding, fever, shortness of breath and lower abdominal pain. She was tachycardiac with high temperature of 40.7C, raised inflammatory markers (WBC 20, CRP 310) and b-hCG (107) with an ultrasound scan (US) showing a 7 cm complex pelvic mass (Figure 1). Laparoscopy indicated extensive colonic and omental adhesions to a 3 cm left tubal ectopic pregnancy with clots surrounding it. Laparoscopic adhesiolyisis with left salpingectomy was performed. She recovered well, her temperature andinflammatory markers settled and was discharged home next day. Her COVID swab was negative.

Precautions were taken while managing this patient as she was COVID-pending with an US suspicion of possible pelvic abscess together with the high temperature and inflammatory markers in early pregnancy which did raise the possibility of chronic ectopic pregnancy.

Chronic ectopic pregnancy (CEP) is rare and it imposes a diagnostic challenge to clinicians due to the unreliable associated imagining modalities and biochemical markers [9,10]. CEP is extremely rare in the UK due to the presence of robust early-pregnancy care service [9].It occurs when the trophoblast invades the implanted structure causing protracted destruction at the site of attachment resulting in repeated rupture and minor bleeding, haematocele which leads to an inflammatory response and generation of chronic pelvic adhesions resembling a complex pelvic mass and mimicking a sepsis like picture [10].

Due to the high suspicion of sepsis with deteriorating general condition in a patient who is still COVID pending, decision for laparoscopic management was undertaken cautiously after consulting with the anaesthetist and microbiologist. Medical management in the form of methotrexate was not considered a reasonable option due to the suspicion of sepsis and the presence of a large pelvic mass. Adequate personal protective equipment was used to reduce viral transmission as the patient was COVID pending.Laparoscopywas considered the preferrable operating method due to the limited available evidence at the time that viral transmission of COVID-19 might differ in terms of open surgery*vs* laparoscopy. However, it has been recently reported that there is no difference in viral transmission whether minimal invasive or open surgery is performed with the advantage that laparoscopy shortens recovery and hospital stay [11].

Conclusion

CEP remains an important differential for women of child-bearing age presenting with pelvic mass and raised inflammatory markers. Whilst rare in developed countries, we may see an increase in cases owing to delayed presentation during the COVID-19 pandemic, as well as other complications of early pregnancy. This case highlights some of the challenges of diagnosis and management during the current climate. It also demonstrates the importance of balancing a safe and robust early pregnancy service with the availability of minimal invasive surgery using appropriate personal protective equipment.

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