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CORNUAL ECTOPIC PREGNANCIES IN RECURRENT ECTOPIC PREGNANCIES AFTER SALPINECTOMY: CASE REPORTS

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ABSTRACT

Ectopic pregnancy remains a major cause of maternal morbidity and mortality in early pregnancy. Recurrent ectopic pregnancy represents a significant clinical challenge, particularly in women with a previous history of ectopic pregnancy and tubal surgery such as salpingectomy. Cornual or interstitial ectopic pregnancy is a rare form of ectopic implantation, accounting for approximately 2–4% of all ectopic pregnancies. Despite its rarity, this condition carries a higher risk of severe hemorrhage due to its location within the highly vascularized uterine cornua. Case Presentasion: A 34-year-old woman with a history of ectopic pregnancy treated with salpingectomy presented with worsening lower abdominal pain in early pregnancy. Physical examination, laboratory evaluation and ultrasonography suggested a suspected ectopic pregnancy. Emergency laparoscopy confirmed a cornual ectopic pregnancy with hematoma and pelvic adhesions. Laparoscopic cornual resection, hematoma evacuation, hystero-raphy, and adhesiolysis were performed successfully without complications. The patient recovered well and was discharged in stable condition. ***Discussion:*** *Recurrent ectopic pregnancy is a known complication in patients with a prior history of ectopic pregnancy and tubal surgery. Although salpingectomy reduces the likelihood of tubal ectopic pregnancy on the affected side, implantation may still occur in other locations, including the interstitial or cornual region. Cornual ectopic pregnancy can grow longer before rupture due to the surrounding myometrial tissue, which may delay diagnosis but increases the risk of catastrophic bleeding once rupture occurs. Laparoscopic management is preferred in hemodynamically stable patients because it offers less surgical trauma, shorter hospital stay, and faster recovery.* ***Conclusion:*** *Cornual ectopic pregnancy may occur as a recurrent ectopic pregnancy even after salpingectomy. Early recognition and prompt surgical intervention are essential to prevent life-threatening complications. Laparoscopic management provides an effective and minimally invasive treatment option with favorable clinical outcomes.*

Keywords: *recurrent ectopic pregnancy, cornual pregnancy, post-salpingectomy, laparoscopy.*

BACKGROUND

Ectopic pregnancy is a condition of implantation resulting from conception outside the uterine cavity and is one of the main causes of maternal morbidity and mortality in the first trimester of pregnancy. The incidence of ectopic pregnancy is estimated to be about 1–2% of all pregnancies, with most occurring in the fallopian tubes (1).

Recurrent ectopic pregnancies are a clinically significant problem, with a risk of recurrence reaching 10–20% in patients with a history of previous ectopic pregnancies (2). One of the main risk factors is a history of tubal surgery, including salpinectomy. Although salpingectomy aims to remove the affected tube, fertilization can still occur through the contralateral side and implantation can occur in other locations, including the interstitial or corneal area (3).

Interstitial pregnancy is a rare form, about 2–4% of all ectopic pregnancies, but it has a higher risk of mortality due to rich vascularization in the uterine corneal region (4). This pregnancy can develop longer before the rupture, but when the rupture occurs, the bleeding that occurs is often massive and life-threatening. Therefore, early diagnosis and proper management are essential.

This case report of cornual ectopic pregnancy shows that in the condition of patients with recurrent ectopic pregnancies after salpingectomy, implantation can still occur in the interstitial or corneal area.

CASE PRESENTATION

A woman 34 year old, G3P1A1, came to the Emergency Unit with complaints of severe lower abdominal pain since approximately 1 hour before entering the hospital. Previously, the patient had felt abdominal pain disappear since about 2 weeks ago. The pain is felt like spinning, accompanied by nausea and vomiting 1 time. The patient is known to be pregnant with a gestational age of about 6-7 weeks with HPHT on November 22, 2025. The patient had previously undergone a cesarean section (SC) surgery in 2022 and a history of ectopic pregnancy before 2024 and had undergone a salpinectomy.

Physical examination showed pressure pain in the lower abdomen with stable hemodynamic conditions, General state of the patient composing consciousness, vital signs of the patient with blood pressure 104/57 mmHg, pulse 80 times/minute, Breathing 24 times/minute, body temperature 36.5C, oxygen saturation 99% of the water room, pain scale 7/10.

Laboratory tests showed beta-human chorionic gonadotropin (B-hCG) levels of 17,361 mIU/mL and routine blood laboratory tests of hemoglobin 11.8 g/dL. Ultrasound examination showed suspicion of recurrent ectopic pregnancy in the rest of the right fallopian tube, precisely in the right corner of the uterus (cornu) (Figure 1).

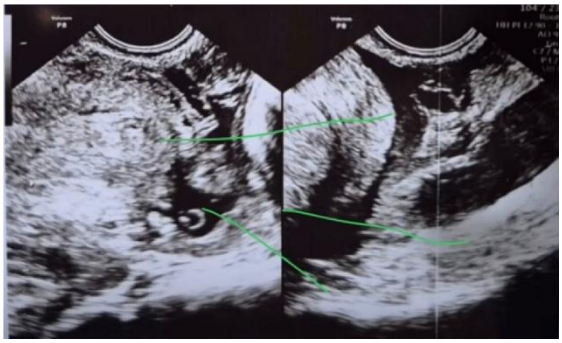

Figure 1. Ultrasound of pregnancy on the rest of the right fallopian tube

Because the patient's hemodynamic state is quite stable, the patient is then planned to undergo emergency laparoscopic surgery. Intraoperative exploration found ectopic pregnancy in the corneal region accompanied by a hematoma in the area of the cavum douglas and adhesion of the right adnexus area (Figure 2).

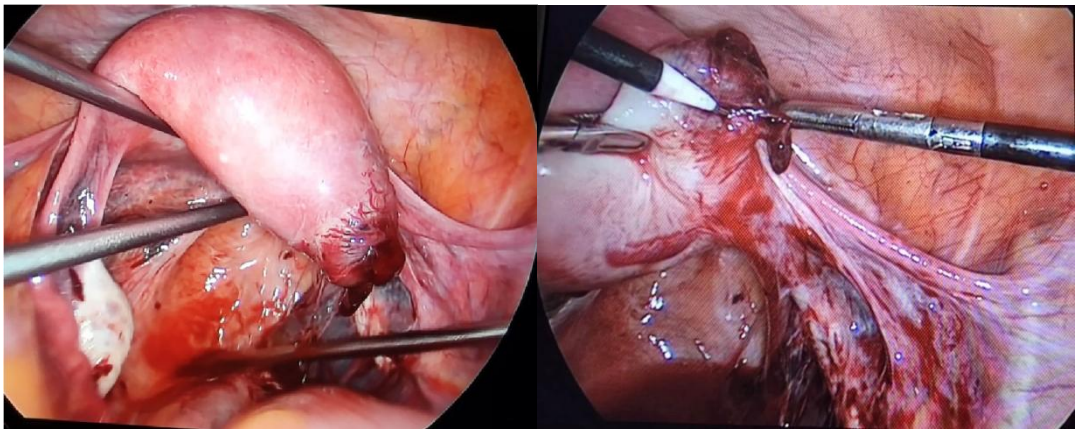

Figure 2. Right corneal ectopic pregnancy

The procedure was carried out laparoscopically in the form of hematoma evacuation, followed by resection of the uterine corneum with wide excision, then hysterophage of the uterine cornea (Figure 3), and adhesiolysis. Then the abdominal cavity is cleaned and given lactate ringer fluid, the wound is sung subcuticular and closed with curapore. The procedure went well without intraoperative complications. The estimated bleeding during surgery is about 500 cc and diuresis is 200 cc. Postoperatively, the patient was treated for 3 days in the room and the patient's condition improved clinically, pain was reduced, lance mobilization, intestinal peristaltic movement was present, flatus was present and the surgical wound was dry and no complications were found. The patient was discharged in a stable state and planned outpatient control a week later.

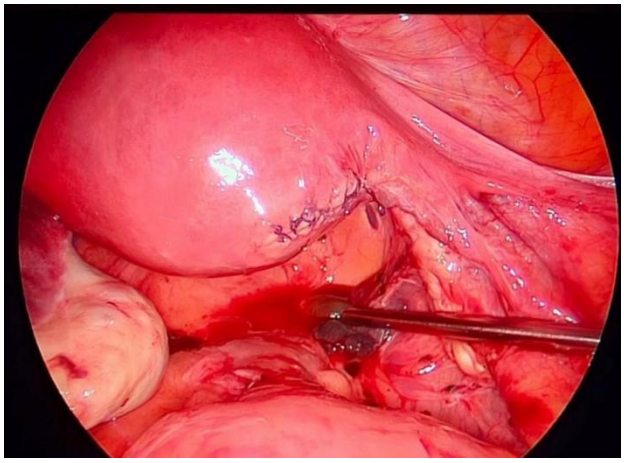

Figure 3. Hysteroratory of the uterine angle (cornu)

DISCUSSION

Ectopic pregnancy is a condition of implantation resulting from conception outside the uterine cavity and remains one of the main causes of maternal morbidity and mortality in the first trimester. The incidence is reported in about 1–2% of all pregnancies, with most occurring in the fallopian tubes (1). Recurrent ectopic pregnancies have an increased risk in patients with a previous history, especially those who have undergone salpingectomy (5). In addition, there are other risk factors such as pelvic inflammatory disease, and in vitro fertilization (IVF) increases the risk of corneal pregnancy (6). Ectopic pregnancies whose implantation in the ipsilateral fallopian tubes in previous salpinectomy conditions are very rare and very few cases have been recorded in the literature (7). However, it was also found in a literature of 32 cases of corneal or interstitial pregnancies, where a history of salpinectomy either ipsilateral or bilateral was found in 37.5% of patients (8).

In this case, the patient has a history of previous ectopic pregnancies that have been managed with right salpingectomy, which is one of the main risk factors for recurrent ectopic pregnancies. The risk of recurrence of ectopic pregnancy has been reported to increase by up to 10–20% in patients with a previous history (2). This suggests that even if the affected tuba has been removed, ectopic pregnancy can still occur through fertilization mechanisms on the contralateral side and implantation at non-tubal sites, including the interstitial or corneal regions (3).

Interstitial pregnancies are a rare form, about 2–4% of all ectopic pregnancies, but have a higher mortality rate than other locations (4). This is due to the implantation location being in the interstitial part of the tube which is surrounded by the myometrium and has a rich blood supply from the uterine arteries and ovaries. This condition allows the pregnancy to develop longer before the rupture occurs, so it is often late diagnosis and when a rupture occurs can cause massive life-threatening bleeding. In addition, because the myometrium is much more easily stretched in a corneal pregnancy than in an ectopic fallopian pregnancy, a corneal pregnancy can go undiagnosed for up to 14 weeks (8).

In this case, the patient comes with progressive complaints of lower abdominal pain accompanied by nausea and vomiting at 6–7 weeks of gestation. These symptoms are in accordance with the classic description of ectopic pregnancy, namely abdominal pain, amenorrhea, and sometimes accompanied by vaginal bleeding. However, not all patients exhibit the classic triad completely, so a high level of clinical vigilance is required. In corneal ectopic pregnancies maternal mortality is 15 times higher than in tubular ectopic pregnancies, which are 2-2.5% and 0.14%, this indicates that it is very important for early identification in patients when coming to the hospital (4).

Laboratory examination showed a β-hCG level of 17,361 mIU/mL which is above the discriminatory zone for the detection of intrauterine pregnancy by transvaginal ultrasound. The absence of intrauterine gestational sacs at these levels further strengthens the suspicion of ectopic pregnancy (9). Ultrasound examination in this case led to the site of implantation in the right corneal uterine region, which is an important finding in establishing the diagnosis of corneal ectopic pregnancy.

The patient was in a stable hemodynamic condition, so a laparoscopic approach was chosen as a management procedure. Laparoscopy is currently the gold standard in stable patients because it provides various advantages over laparotomy, such as less tissue trauma, milder postoperative pain, shorter treatment times, and faster recovery and lower risk of complications than laparotomy (10).

On intraoperative measures, a corneal ectopic pregnancy was found accompanied by a hematoma in the Douglas cavum and adhesions to the right adnexsa. The actions carried out were in the form of hematoma evacuation, corneal resection with wide excision techniques, hysterophy, and adhesiolysis. The cornual resection technique is one of the main options in managing corneal ectopic pregnancy, especially in cases with large lesion size or bleeding (4).

Intraoperative bleeding in this case of about 500 cc is still within tolerable limits and successfully controlled during the procedure. The absence of intraoperative complications and postoperative clinical improvement indicate successful management.

After surgery, patients show good recovery with pain improvement, gastrointestinal function returning to normal, as well as good surgical wounds with no signs of infection. The length of treatment of 3 days is also in accordance with the advantages of laparoscopic procedures which allow faster recovery than laparotomy.

This case illustrates that corneal ectopic pregnancy can occur as a recurrent form of ectopic pregnancy even after a salpingectomy. Therefore, patients with a history of ectopic pregnancy should be closely monitored in subsequent pregnancies, including early evaluation with ultrasound to determine the location of implantation.

CONCLUSION

Corneal ectopic pregnancy is a rare form of ectopic pregnancy but has a high risk of complications, especially massive bleeding due to rich vascularization in the corneal uterine area. This case shows that recurrent ectopic pregnancies can still occur even if the patient has had a previous salpingectomy. Early diagnosis and prompt management are essential to prevent serious complications such as massive bleeding.

The laparoscopic approach is an effective, safe, and clinically effective method for patients with stable hemodynamic conditions.

SUGGESTIONS

Patients with a history of ectopic pregnancy, especially those who have had a salpingectomy, require close monitoring in subsequent pregnancies, particularly in the first trimester. Early transvaginal ultrasound examination is highly recommended to confirm the implantation site and detect possible recurrent ectopic pregnancies, especially to detect possible ectopic pregnancies in unusual locations, such as the corneal. In addition, education to patients about the risk of recurrent ectopic pregnancies and the importance of early screening in subsequent pregnancies is needed to improve timely detection and management.

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