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Case Report

A Case of Cornual Pregnancy after Ipsilateral Salpingectomy for Isthmic Pregnancy

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Abstract:

Ectopic pregnancies comprise approximately 1-2% of all pregnancies, with most occurring in the ampulla of the fallopian tube. Cornual pregnancy after ipsilateral salpingectomy is rare. We report a case of spontaneous cornual pregnancy 8 months after ipsilateral salpingectomy for isthmic pregnancy in a 32-year-old woman.

In our patient, the gestational sac was not visualized in the uterus at 5 weeks of gestation. The patient experienced abdominal pain and an ultrasound examination revealed a hematoma around the right cornual region. Emergency laparoscopy was performed, which revealed the ruptured cornual pregnancy and surrounding hematoma. A wedge-shaped incision was made at the site of the cornual pregnancy, followed by myometrial suturing.

In cornual pregnancies, the risk of rupture should be considered even in the early pregnancy stages.

Keywords: cornual pregnancy; ectopic pregnancy; fallopian tube; pregnancy; salpingectomy

Introduction

Ectopic pregnancies comprise approximately 1-2% of all pregnancies [1]. The most common site of ectopic pregnancy is the ampulla of the fallopian tube. Ectopic pregnancy in the isthmic region is said to occur in approximately 10% of the cases [2]. In addition, it is reported that approximately 0.3-4.2 % of ectopic pregnancies are located in the interstitial portion of the fallopian tube and are known as cornual pregnancies [3-6]. Recurrent ectopic pregnancies occur in approximately 10% of patients with a history of ectopic pregnancy [5.7]. Although rare, there have been some reports of cornual pregnancy in the ipsilateral fallopian tube after salpingectomy.

We report a case of spontaneous cornual pregnancy after ipsilateral salpingectomy for an isthmic pregnancy.

Presentation of case

The patient was a 32-year-old woman, gravida three, para one with one prior cesarean section. Apart from her gynecological history, her medical history was otherwise insignificant. In 2019, she became pregnant spontaneously, but the pregnancy implanted in the isthmus of the right fallopian tube, and therefore, she underwent laparoscopic right salpingectomy. The fallopian tube was resected using a vessel sealing system (LigaSure™ Blunt Tip Family with Nano-Coated Jams, Medtronic). Eight months later, another spontaneous pregnancy occurred. No gestational sac was visualized in the uterus at 5 weeks of gestation; a luteal cyst in the left was confirmed by using transvaginal ultrasonography. The serum human chorionic gonadotropin (hCG) level was 1,143 mIU/mL. Two days later, the patient experienced abdominal pain and an ultrasound examination revealed a hematoma around the right cornual region (Figure. 1).

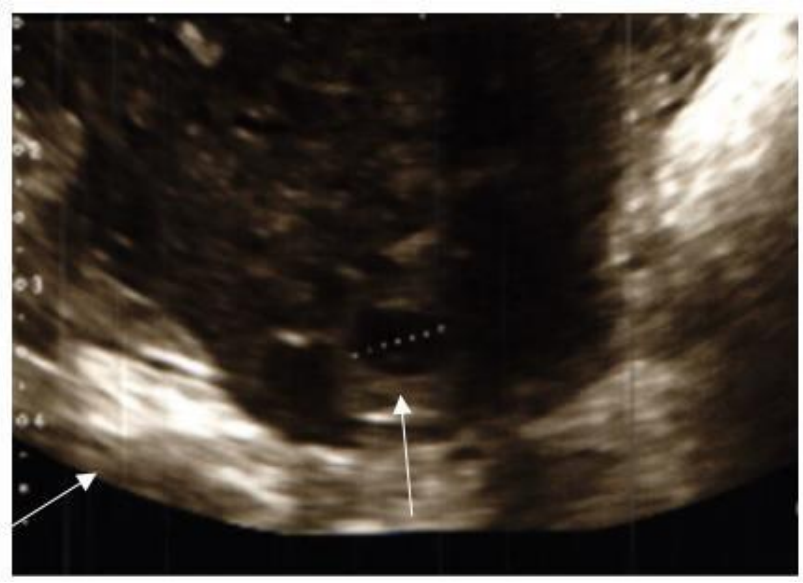

Figure 1: Ultrasound examination revealing a hematoma around the cornual region of the right fallopian tube.

The patient and her husband were explained the possibility of intra-abdominal bleeding and they agreed to the surgery. Emergency laparoscopy revealed a ruptured cornual pregnancy and surrounding hematoma (Figure. 2).

Figure 2: The ruptured cornual pregnancy and surrounding hematoma

A wedge-shaped incision was made in the cornual pregnancy using monopolar cauterization, and the myometrium was sutured with a single nodule suture (Figure. 3).

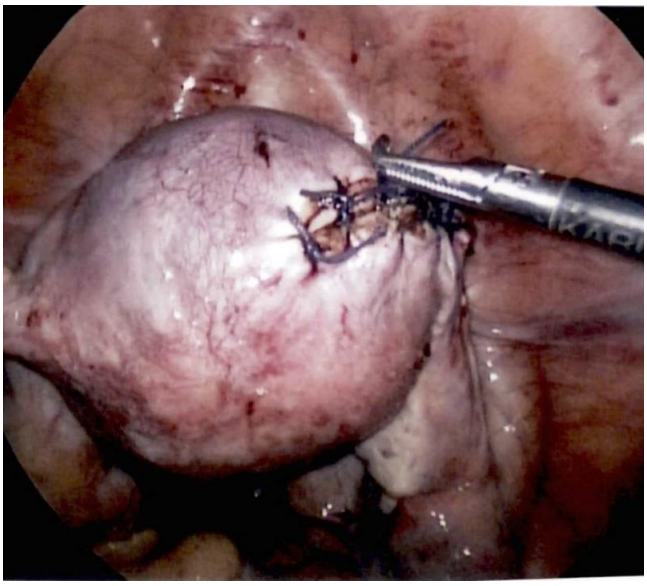

Figure 3: The myometrium sutured with a single nodule suture.

The postoperative course was uneventful; the patient was discharged on the third postoperative day and followed up in an outpatient setting.

Discussion

The mechanism by which a pregnancy occurs in the ipsilateral fallopian tube stump after salpingectomy is unknown; nonetheless, the incidence of such pregnancies is reported to be 0.3–4.2% [3-6].

Question on the side of fallopian tube excision there are two possible causes of pregnancy. One is the theory of external migration, in which a recommunication port is formed in the stromal part of the fallopian tube, and the fertilized egg implants in the stromal part of the fallopian tube from the abdominal cavity side [8]. The other is the theory of internal migration, in which the fertilized egg that has passed through the healthy fallopian tube on the opposite side uterus and implants stromal part of the fallopian tube [9].

In this case, a left luteal cyst was seen after excision of the right fallopian tube, and the theory of internal migration was suspected.

During 10 years, there were 138 cases of ectopic pregnancy in our department, 13 (9.4%) of which were recurrences; eight of these cases occurred after salpingectomy, three of which (2.2%) were located in the cornual region of the ipsilateral fallopian tube. The remaining five ectopic pregnancies occurred in patients in whom the fallopian tube was preserved. A case of cornual pregnancy was reported previously in which the fallopian tube was preserved by performing cornual wedge resection, however, this patient experienced a recurrent ectopic pregnancy in the ampullar region of the ipsilateral uterine tube [10]. In cornual pregnancy, a previous study recommends tubal resection and sufficient coagulation of the cornual region [11]. However, it has been reported that coagulation after tubal resection weakens the muscle layer and causes placenta accreta[4]. We have not encountered cases of placenta accreta in our department yet, nonetheless, it seems necessary to prevent them by encouraging patients to wait a longer period of time until becoming pregnant again.

Cornual pregnancies account for 2-4% of all tubal pregnancies, with a rupture mortality rate of 2-2.5%, which is reportedly more than 7 times higher than that of other ectopic pregnancies [12.13]. It has been reported that the detection rate of cornual pregnancy by transvaginal ultrasonography is 71.4%, and early detection can be facilitated by combining transvaginal ultrasonography with serum hCG level assessment [14]. In the future, it seems that surgery combined with hysteroscopic and laparoscopic surgery will be possible [15].

In the case of cornual pregnancy, it may be necessary to take into consideration the risk of rupture even in the early stages of the pregnancy. Although rare, cornual pregnancy after ipsilateral salpingectomy is possible. In our department, we frequently encounter recurrent ipsilateral tubal pregnancies in cases in which the fallopian tube was preserved. In cornual pregnancies, resection of the fallopian tube and coagulation of the remnant tissue may prevent recurrences, but it is also important that patients wait a longer period until they become pregnant again. Before she want to get pregnant next time, I should check the fallopian tube angle with a hysteroscope.

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Disclosure

Conflict of interest statement

The authors have no conflicts of interest to disclose.

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None.

Ethical approval

Not applicable.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

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