Case Report

Rupture of Unilateral Twin Tubal Pregnancy

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A 32-year-old Thai woman presented with acute severe lower abdominal pain and 8 weeks of amenorrhea. The patient was hypotension, had anemia and signs of lower abdominal peritonitis. Initial diagnosis was tubal pregnancy with rupture. Intraoperatively, there were hemoperitoneum and two fetuses were found in the pelvis. Final diagnosis of ruptured unilateral twin tubal pregnancy was achieved. A right salpingectomy was done. There was no immediate complication.

Keywords: *Twin, Ectopic, Pregnancy*

J Med Assoc Thai 2008; 91 (2): 249-52
Full text. e-Journal: *http://www.medassocthai.org/journal*

Ectopic pregnancy is a common medical problem. The incidence of this disease has been increasing over the past. There are multiple factors that contribute to the relative risk of ectopic pregnancy such as a history of tubal surgery, conception after tubal ligation, using fertility drugs and assisted reproductive technology[1]. The most frequent type of ectopic twin pregnancy is heterotopic pregnancy that has increased following *in vitro* fertilization[2]. The unilateral twin tubal pregnancy is quite rare with a reported incidence of 1:200 ectopic pregnancies[3]. The early diagnosis make the clinicians decide to treat the patients in the appropriate way and contribute to the decrease in morbidity that has occurred.

The present report describes a successful management of ruptured unilateral twin tubal pregnancy in a patient who had no risk factors for both ectopic and twin pregnancy.

Case Report

A 32-year old, gravida 1 para 0, presented to the emergency room with a 1-hour history of acute severe lower abdominal pain. There was no history of vaginal bleeding or fever. Her last menstrual period was 8 weeks prior to presentation. The patient had received no infertility treatments and had no risk factors for ectopic pregnancy. Two days earlier, she had gone to another hospital with a history of gradual onset of right lower quadrant abdominal pain. The urine pregnancy test was positive, a transabdominal sonography showed a ring echogenic mass at the right adnexa. It contained a single fetus with fetal pole measuring 14 mm. Ectopic pregnancy at right fallopian tube was suggested. She was scheduled for laparoscopic surgery on the next day.

Physical examination revealed that her vital signs were blood pressure of 80/60 mmHg and pulse rate of 100/minute. Her conjunctivas were paled. Her lower abdomen was distended and guarded with marked tenderness at the right lower quadrant. The pelvic examination was not performed. The initial diagnosis was rupture of tubal pregnancy with hypovolemic shock. After the preoperative treatments, she was sent to the operative room immediately. Initially, she had a hematocrit level of 31%. The other blood chemistry levels were examined later.

The patient underwent emergency exploratory laparotomy. Intraopertively, a large collection of blood was found in the pelvic cavity (800 ml). The ampullar part of the right fallopian tube was found ruptured and two dead fetuses were found free in the pelvis as shown in Fig. 1 and Fig. 2. The fetal poles measurement was 8 mm and 9 mm, respectively. There was active bleeding

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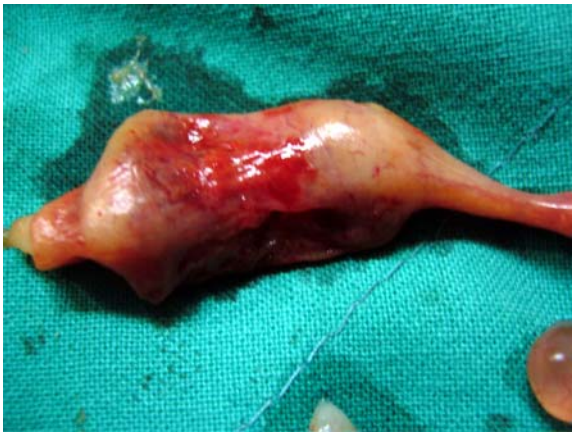

Fig. 1 The ruptured area at ampullar part of right fallopian tube

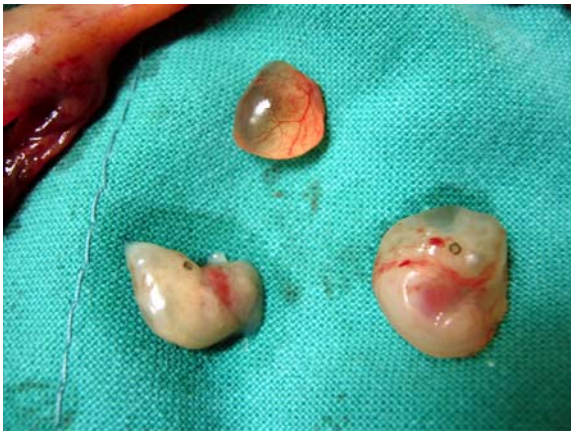

Fig. 2 Fresh alive twin fetuses

from the ruptured area. A right salpingectomy was then performed. The other tube was apparently normal. The right ovary was identified and appeared normal. The two corpus luteums were identified separately in the left ovary without evidence of bleeding. There was no immediate intraoperative complication.

Her postoperative care was uneventful. The patient was discharged three days after surgery. The histopathology of the specimen confirmed the diagnosis established in the operative field.

Discussion

The preoperative diagnosis of twin tubal pregnancy is difficult and potentially may lead to significant morbidity or mortality[4]. Based on the changing pattern of clinical presentation, the gynecologist should pay special attention in such suspected cases. All available methods of diagnosing the suspected cases should be used including ultrasonography and blood chemistry tests such as beta-human chorionic gonadotropin (hCG) level.

In the present case, transabdominal sonography was performed and the initial diagnosis was unruptured ectopic pregnancy. The serum hCG level was not tested. Therefore, the twin tubal pregnancy was not in mind, even if it had a higher incidence of rupture. Her treatment was delayed and ruptured of tubal pregnancy occurred subsequently.

There is evidence that the hCG level of twin tubal pregnancies is higher than that of a singleton tubal pregnancy and surgical treatment of those cases is appropriate[5]. The mean hCG level of twin and singleton ectopic pregnancies was 9,849 mIU/ml and less than 3,000 mIU/ml, respectively[6]. Transvaginal sonography has shown to be effective in the diagnosis of intact twin tubal pregnancy and extremely sensitive in the detection of free pelvic fluid[7].

The pathogenesis of unilateral twin tubal pregnancy is not clear. Several factors are thought to contribute to the occurrence of ectopic pregnancy. These include mechanical obstruction within the tube[8], defects of the zygote itself or in the hormonal milieu. It is likely that the twin tubal ectopic pregnancy is also increased in patients treated by *in vitro* fertilization[9,10], but the conception in the present case was spontaneous. The unilateral twin tubal pregnancy cans occur spontaneously[11]. Some investigators suggested that the larger cell mass of the fertilized twin zygote might cause retarded tubal transport along a damaged tube and result in tubal implantation[12]. In the present case there was evidence of two corpus luteums in the contralateral ovary; these suggested that twin tubal pregnancy most likely caused by delayed transportation of two zygotes. The zygosity of twin in the present case was not studied. Most of the twin tubal pregnancies were thought to be monozygotic. However, in the majority of the reported cases, the zygosity was determined subjectively by using observation such as size and gestational age similarity, fetal membranes and number of corpus luteum[13]. It seems to be that the method to determine zygosity of the twins by using DNA probes that detect restriction fragment length polymorphisms more accurately[14]. Some researchers speculate that many of the unilateral ectopic twins who were thought to be monozygotic may actually have been dizygotic[14].

In the past, there have been a few cases of twin tubal pregnancies diagnosed preoperatively[6,15]. Almost all the reported cases were diagnosed retrospectively either by intraoperation or histology[13]. Over the years, the treatment of ectopic pregnancy has progressed from salpingectomy by laparotomy to conservative surgery by laparoscopy and more recently, by medical therapy[1]. There are a few reports of successful laparoscopic management of ruptured tubal twin pregnancy[16] and operative laparoscopic salpingostomy[17]. The present case was not appropriate for that type of surgery because she was in an unstable hemodynamic condition. The laparotomy is better for this situation to control the bleeding point from the ruptured site.

The present case underscores the need of early recognition and accurate diagnosis of twin tubal pregnancy, that it may grow larger and therefore, have a higher risk of rupture. The high-resolution transvaginal sonography is very helpful in the diagnosis of this condition[15,18].

Conclusion

A spontaneous unilateral twin tubal pregnancy can occur in patients who have no known predisposing factor. Early diagnosis has made this disorder amenable to appropriate treatment. Transvaginal sonography is the investigation of choice in the diagnosis.

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การแตกของครรภ์แฝดบริเวณหลอดมดลูกข้างเดียวกัน

สุเมธ พัฒนาสุทธินนท์

ผู้ป่วยหญิงไทย อายุ 32 ปีมีอาการปวดท้องน้อยรุนแรงและเฉียบพลันร่วมกับขาดระดู 8 สัปดาห์ ผู้ป่วยมีความดันโลหิตต่ำ ชีด และอาการแสดงของการอักเสบในช่องท้องส่วนล่าง วินิจฉัยเบื้องต้นเป็นการแตกของการตั้งครรภ์บริเวณหลอดมดลูก การผ่าตัดพบมีเลือดออกในช่องท้องและตัวอ่อน 2 คนในอุ้งเชิงกราน วินิจฉัยขั้นสุดท้ายคือการแตกของครรภ์แฝดบริเวณหลอดมดลูกข้างเดียวกันได้ทำการผ่าตัดหลอดมดลูกด้านขวาออก ไม่พบภาวะแทรกซ้อนหลังผ่าตัด