

# Pre-operative Diagnosis of Alive Twin Tubal Pregnancy

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## ABSTRACT

A case of twin tubal pregnancy was reported. The patient presented with lower abdominal pain with some vaginal bleeding and was diagnosed with transvaginal sonography at approximately eight weeks of gestation. An uneventful salpingectomy was subsequently performed.

**Keywords:** Ectopic pregnancy, twins, transvaginal sonography

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**E**ctopic pregnancy is the leading cause of maternal morbidity and mortality. In general, the incidence of ectopic pregnancy is 1-2% of all pregnancies<sup>1</sup> and this can be observed in 5-10% of live fetuses at the time of ultrasonographic examination.<sup>2</sup> Twin gestations occur in approximately 1:80 of spontaneous pregnancies and 30% of these are monozygotic.<sup>3</sup> Therefore, alive twin tubal ectopic pregnancies are extremely rare with an incidence of 1:125,000 pregnancies.

Even though more than 100 cases of twin tubal pregnancy have been reported, there are only a few cases with documented fetal heart motions in both embryos or fetuses.<sup>4-9</sup> This is another case, preoperatively diagnosed by transvaginal sonography, as the unilateral alive twin tubal pregnancy.

## CASE REPORT

A healthy 30-year-old woman, primigravida, was admitted to the hospital with a complaint of acute abdominal pain. The patient had a history of right ovarian cystectomy due to a right ovarian cyst in the last year. On admission, she had missed her periods for two months despite a previous history of regular menstruation. Neither contraception nor any medication had been taken before. She noted that there had been some

vaginal bleeding for three days. Meanwhile, the lower abdominal pain had gradually increased. Physical examination revealed stable vital signs and tenderness on palpation in the left lower quadrant of the abdomen without any evidence of peritonitis. On gynecological examination, the uterus was normal in size. Next to the left side of the uterus, there was a tender mass, 3 cm. in diameter. No profuse bleeding through the closing cervical os was observed during the examination.

Subsequently, a pelvic ultrasonography was performed transvaginally using a Voluson 730 Expert ultrasound equipment (GE Medical Systems) with a 5-9 MHz convex array transducer. As shown in Fig 1, the uterine cavity was empty. When rocking the vaginal probe to the left, an adnexal mass comprising two gestational sacs with an alive embryo inside each sac was discovered (Fig 2). The gestational age corresponding to the crown-rump length of both was approximately eight weeks. A moderate amount of free fluid was also seen in the cul-de-sac.

At that time, her hematocrit was about 38%. Exploratory laparotomy was performed. Hemoperitoneum of 300 ml was present. The left fallopian tube was hemorrhagic edematous at the ampullar part, 5 cm. in diameter. Some blood-stained fluid spillage was seen from the fimbrial end. The uterus and the right tube were grossly normal. Then the left tube was resected and submitted for pathologic examination. The postoperative period was unremarkable. The pathological report revealed two embryos in two gestational sacs residing in the fallopian tube.

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**Fig 1.** The empty uterus and free fluid in cul-de-sac.

## DISCUSSION

The actual incidence of unilateral twin ectopic pregnancy may be much higher than previously reported. This can be explained by the hypotheses that either twinning is associated with some early wastage of one embryo, or the diagnosis from the pathological specimens or from hemorrhagic masses with sonography is sometimes difficult.<sup>10</sup>

Some women with ectopic pregnancy have one or more risk factors, including previous tubal surgery, previous ectopic pregnancy, concurrent tubal pathology, in utero DES exposure, previous genital infection, infertility and assisted reproductive technologies, intrauterine device in situ, and other lifestyle and environmental factors.<sup>11</sup> Furthermore, a large cell mass resulting from the early twinning of a fertilized zygote may be slowly transported along the damaged tube leading to tubal implantation. In this case, there was no identifiable risk factor, as pelvic or abdominal surgery not involving the fallopian tube usually does not increase the risk.<sup>12</sup>

A classic triad of symptoms associated with ectopic pregnancy is delayed menses, irregular bleeding and lower abdominal pain. Only 45% of cases present with these symptoms.<sup>13</sup> The most specific sign for diagnosing ectopic pregnancy from sonography is the demonstration of an adnexal gestational sac with a fetal pole and cardiac activity. In this case, the patient had such clinical features and transvaginal sonography demonstrated the alive twin embryos within the left adnexal mass.



**Fig 2.** The left adnexal mass containing two gestational sacs with an alive embryo inside each sac.

Like other cases previously reported, surgical treatment was suitable for this case. The presence of cardiac activity in an ectopic pregnancy is associated with a reduced chance of success following medical therapy and should be considered a contraindication to medical therapy.<sup>14</sup> There is no clear evidence whether salpingotomy should be preferred to salpingectomy in the presence of a healthy contralateral tube.<sup>15-16</sup> The management in the case was therefore left salpingectomy.

Up to now there have been only a few cases of unilateral alive twin tubal pregnancies. Early diagnosis, using the clinical features with the assistance of transvaginal sonography, will improve the maternal morbidity and mortality from the disease and complications.

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