

Ruptured Unilateral Twin Tubal Ectopic Pregnancy. Case Report of an oddity & Literature Review.

Case Report

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ABSTRACT

Background: An ectopic pregnancy (EP) is a type of conception in which, the fertilized egg is lodged outside the uterine cavity. Twin ectopic pregnancies are a rarity, and the reported cases of twin tubal pregnancies are a handful to date.

Case Report: We report a case of a 35 years old patient who presented to the emergency with the complaint of lower abdominal pain and intermittent vaginal discharge. She was diagnosed with twin tubal alive gestation, underwent exploratory laparotomy and right salpingectomy.

Conclusion: Ectopic pregnancy can occur even in the absence of known risk factors. Its incidence is on the rise. It is a leading cause of first-trimester maternal deaths and can be easily diagnosed with Beta HCG levels and transvaginal ultrasound.

Keywords: Tubal Gestation, Tubal Twin Gestation, Ectopic pregnancy, first trimester mortality, maternal mortality, Transvaginal Ultrasound, tubal surgery.

INTRODUCTION

An ectopic pregnancy (EP) occurs when a fertilized egg lodges itself at sites other than the endometrial lining of the uterus. Salpinges are the most common sites of ectopic pregnancy. The last three decades have seen a colossal amplification in the global incidence of EP. The reported incidence of ectopic gestation is 1:112 to 1:1308 in Pakistan.^[1] EP used to be a chief causative factor of first-trimester maternal mortality in the past, but recent advances in medical imaging, surgical techniques, improved emergency care and availability of minimally invasive laparoscopic surgery have to lead to earlier detection & prompt management of EP thus overall reducing the maternal mortality from 3.5 to 2.6 per 10'000 ectopic pregnancies according to one study.^[2] Ectopic gestation is a potentially life-threatening problem, responsible for 10% first-trimester maternal mortality.^[3] Much has been reported in the literature about ruptured and unruptured single ectopic gestation. It is noteworthy that the incidence of live twin ectopic gestation in natural conception is still unheard of and accounts for only 1 in 200 ectopic pregnancies.^[4] The pioneer case report of alive tubal twin EP was published in 1891.^[5] There are hundreds of cases, reporting single ectopic gestation, all of which were diagnosed pre-operatively, with the aid of routine and trans-vaginal ultrasonography, but there are only a

handful of case reports of alive unilateral tubal twin conceptions with normal heartbeats on fetal poles on presentation.^[6] Tubal-twin EP occurring unilaterally is a rare occurrence in itself, but the rarest is the bilateral tubal pregnancy.^[7]

A total of 242 case reports of tubal-twin gestations have been published in the literature, with 17% (n=42) reported in the last ten years.

Unilateral alive tubal twin gestation is a rarity. To date, only 12 cases of live twin tubal gestations have been reported.^[6,8]

We present a unique case of right tubal-twin ectopic gestation in a natural conception with normal heartbeats exhibited on both the gestational sacs. This case presented to the emergency of the Gynaecology unit on call. It was diagnosed as a case of viable tubal-twin ectopic pregnancy based on history, examination, transabdominal, and transvaginal (TVS) Doppler ultrasonography with color flow imaging and M mode.

CASE REPORT

Gravida 8, para 3, 36 years old female presented to the Obstetrics & Gynaecology emergency of Bolan Medical Complex Hospital, Quetta Pakistan on June 1st, 2018



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[5-8]

with history of amenorrhoea for ten weeks, frequent pains in lower abdomen and vaginal spotting for the last 12 and 6 days respectively. She was vitally stable, a-febrile. Examination of the abdomen revealed grade 3 tenderness in the pelvic area with guarding all over the abdomen. Per vaginal examination was done on which pelvic floor tenderness was noted, cervical os was not open, and there was slight spotting. The urine was sent for the pregnancy test, which came back positive. Her complete blood count revealed anaemia (Hb=9g%). The other haematological and routine chemistry parameters were within the normal range. She screened negative for viral hepatitis, and her blood group was A-positive. Her past obstetrical history included seven normal pregnancies, all delivered through spontaneous vaginal delivery. There was no significant history of abortion in the past. There was no significant history of sexually transmitted diseases, abdomino-pelvic surgeries, intrauterine contraceptive device placement, or fertility treatment. The history of systemic disease was negative. Her last pregnancy was two years ago. The patient was immediately sent to diagnostic radiology on call for emergent transvaginal ultrasound (TVS). A transvaginal Doppler ultrasound with the colour flow was performed using standard frequency endocavity transducer (GE Healthcare, USA). Realtime greyscale scan showed uterus to be in an anteverted, anteflexed position, which was moderately bulky, with endometrial thickness of 12mm. The uterine wall had a higher echogenic signal. No gestational sac was evident within the uterus. The right ovary had a normal size (2.7 × 0.7 × 1.8 cm) and volume (3.9cc). The right adnexa showed abnormal echo patterns, which on a detailed scan revealed to be two separate embryonic poles within one gestational sac. There was no intertwin membrane between the two fetuses. Separate heartbeats were recorded in both the embryonic poles within a single gestational sac, which was confirmed on colour Doppler, M Mode, and grey scale TVS. The diameter of the gestational sac was 23 mm, which approximated the gestational age of 10 weeks. The crown-rump length of the first twin was 3.3 cm with a heart rate of 104 per minute, and the second twin was 3.2 cm with a heart rate of 112 per minute, which augmented the gestational age of 10 weeks. The left ovary appeared normal. At the time of the scan, the abdomen was devoid of free fluids and blood. Based on history, examination & investigations, a diagnosis of alive twin ectopic (monochorionic, monoamniotic) pregnancy in the right fallopian tube with an approximate gestational age of



Figure 1: Per operative findings of twin fetuses with large hematoma.

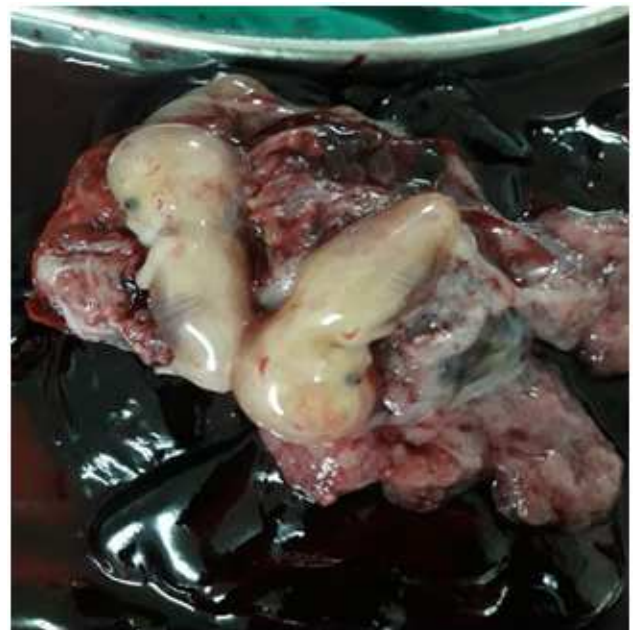


Figure 2: Per operative findings of twin fetuses with large hematoma.

10 weeks, was made. The on-call consultant gynaecologist counselled the patient about her situation; An informed consent for laparotomy and salpingectomy was obtained. While the patient was being shifted to operation theatre from emergency, she collapsed, and her blood pressure dropped to 60/ not recordable mmHg. Hemaccyl infusion was started, and the patient was put under general anaesthesia.

Emergency laparotomy was done under strict aseptic measures. The abdomen was opened through a lower midline incision, tissues dissected & gently retracted. There were about 2 litres of blood in the abdomen, and bleed was coming from ruptured right ampullary ectopic

pregnancy [Figures 1 & 2]. The hemostasis was secured, the right salpingectomy was done, and the wound closure was done in layers with Vicryl 3/0, Vicryl 2/0, and Prolene 1 sutures. Postoperative recovery was unremarkable, and she was discharged on the third postoperative day. She was kept on regular followup through the outpatient department for six months after surgery and remained well.

DISCUSSION

Ectopic gestation accounts for 2% of pregnancies and 16% of all the pregnancies presenting to the emergency on-call units.^[9] Ectopic gestation is a diagnostic challenge, and delay in diagnosis may have serious implications for females of childbearing age. The patient is usually missed due to overlap of the symptoms with miscarriage, such as amenorrhoea, pain, and vaginal bleeding.^[10] This condition is one of the preeminent causes of maternal deaths in the 1st trimester and is responsible for 4-10% of entire pregnancy linked mortalities.^[4,11] The patient may lose a fallopian tube and even ovary, thus compromising her future fertility. The incidence of ectopic pregnancies has been increasing for the last few decades. Many risk factors have been identified for EP; Advanced maternal age, positive history of pelvic inflammatory disease, ectopic gestation, surgery of fallopian tubes, pregnancy after tubal ligation, multiple sexual partners, intra-uterine contraceptive devices, smoking, medical treatment of infertility assisted reproductive technology and congenital uterine anomalies increase the risk of ectopic gestation up to 54%.^[12,13] It is interesting to note that there was no known risk factor in 3 out of 12 reports of unilateral tubal twin gestations with fetal cardiac activity, reported between 1994 and 2015. Our patient did not have any risk factors that predisposed her to the development of EP.^[6,11] In the United States, the incidence of ectopic pregnancy has risen four-fold since 1970 (from 0.5 % of all pregnancies to 2%).^[14] As reported in the literature, 97% of EP occurs in fallopian tubes, including; Ampullary EP accounts for 55% of the cases whereas isthmic EP, and fimbrial EP account for 25% and 17% respectively. EP has also been reported in the ovary, cervix, abdominal cavity, and extra-abdominal sites in less than 5% of the cases.^[8] Our patient had right adnexa tubal twin EP, in the ampulla of right salpinx. One of the most sensitive markers of pregnancy is the serum β -hCG level. The serum β -hCG level doubles every 48 - 72 hours in normal gestation. Clinicians should suspect an EP when serum β -hCG level is 1500 IU/L, or higher and TVS shows an empty uterine cavity. Single EP has a

lower β -hCG level as compared to normal intrauterine gestations; however, tubal twin EPs may mimic normal gestation as they have higher levels of beta-hCG.^[10,13] TVS has transformed the trends in diagnosis of early conception and other obstetrical-gynecological conditions and has become the clinician's first choice for evaluating first-trimester gestation and its complications. It has a better resolution for pelvic organs as compared to transabdominal ultrasound. TVS allows excellent visualization of the female reproductive system and easily detects an ectopic mass with or without an embryo and provides elaborate information about adjacent structures.^[16] EP is becoming common, but tubal twin EP is a very rare condition, and among published reports of tubal twin EPs, to-date, only 8 cases of alive twin tubal EP have been reported.^[10,17] In our patient, two separated heartbeats were recorded in both the embryos while performing TVS on M mode and colour doppler with no free fluid or blood in the abdominal cavity. While she was being shifted to the operation theatre, she went into hypovolemic shock, and ruptured tubal twin ectopic pregnancy was found per operatively.

Twin gestation is more prevalent among those females who have a positive past and family history of twin pregnancies.^[13,15] In the case of our patient, past, and family histories were negative for twin gestations. The majority (95%) of the unilateral twin tubal EPs are monochorionic and monoamniotic.^[18] The TVS of our patient reported the same possibility. For the unilateral tubal twin pregnancies, surgical intervention is superior to medical management with methotrexate. There have been less than ten reports of tubal twin EP (3 unilateral, 1 bilateral) treated with methotrexate.^[8] However, Arikan et al. suggested that the nonsurgical treatment may be favoured in tubal twin EPs in case of stable maternal vital signs and negative fetal cardiac activities.^[20,21]

EP related morbidity and mortality are on a gradual decline, because of improved diagnostic methods and superior management protocols. Twin tubal pregnancies are at a higher risk of developing complications as compared to single tubal pregnancies because two gestational sacs would double the volume and increase the chances of rupture.^[2-15]

CONCLUSION

Ectopic pregnancy can occur even in the absence of known risk factors. Its incidence is on the rise in the last few decades. A few of patients presenting with ectopic gestation can be given a trial of conservative management, and when conservative management fails, surgery should be considered. It is a leading cause of first-trimester maternal deaths and can be easily

diagnosed with Beta HCG levels and transvaginal ultrasound.

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CONFLICT OF INTEREST

The Authors declared no conflicts of interest.

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