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SPONTANEOUS UNILATERAL TWIN TUBAL ECTOPIC PREGNANCY

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ABSTRACT Ectopic pregnancy is a major risk for women of child bearing age and if not diagnosed and treated properly can lead to life-threatening complications. Unilateral twin ectopic pregnancy is still a rare condition and only about 100 cases have been reported in the literature. In this article, we present a case of ruptured twin ectopic pregnancy in the right fallopian tube. A 30 year old woman who had come to our casualty with acute onset pain in abdomen and bleeding per vaginum. Her pregnancy test was positive. Transvaginal sonogram suggestive of ruptured ectopic. Exploratory laparotomy confirmed ruptured right fallopian tube and two dead fetuses found free in the pelvis. She was successfully managed surgically.

KEYWORDS : unilateral ectopic pregnancy, twins, twin ectopic, tubal pregnancy

INTRODUCTION:

An ectopic pregnancy occurs when a blastocyst gets implanted in a location other than the endometrial lining of the uterine cavity. This is true for both singleton and multi-gestational ectopic pregnancies. The incidence of ectopic pregnancy has increased since the introduction of assisted reproductive techniques (ART) and tuboplasty. As many as one in 100 pregnancies is an ectopic pregnancy.[1]

The commonest site for ectopic pregnancy is the fallopian tube (approximately 95%), with 3% being ovarian in location and the rest (<1%) abdominal or cervical or in the cornua.

Although quite rare, the incidence of twin ectopic pregnancies is estimated to occur in 1/125,000 pregnancies, and twin tubal ectopic 1/200 of ectopic pregnancies.[2]

Only 100 cases of unilateral twin ectopic pregnancy have been described in literature worldwide since the first report in 1891.[3] Even smaller fraction of cases have been detected with sonography since Santos et al. radiologically diagnosed the condition in 1986.[4]

If mismanaged, this is a potentially life-threatening problem.

CASE REPORT:

30 years, G2P1L1, 6 weeks amenorrhea came to casualty with pain in right iliac region with vaginal bleeding since 1 day. Her pregnancy test was positive Transvaginal sonogram did not show any intrauterine or extrauterine gestation. The right and left ovaries were normal in appearance, and free fluid was observed within the cul-de-sac suggestive of ruptured ectopic. She denied use of an intrauterine device (IUD) or treatment with ovulatory agents. Her βhcg was 4600mIU/mL.

The patient underwent emergency exploratory laparotomy. Intraoperatively, large hemoperitoneum was found in the pelvic cavity (~1500 ml). The ampullary 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.

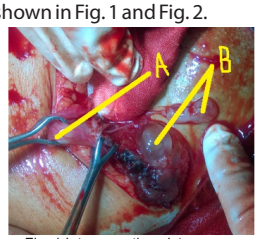

Fig. 1 Intraoperative picture
A. Ruptured right fallopian tube (Ampullary region)
B. 2 fetuses in separate sac

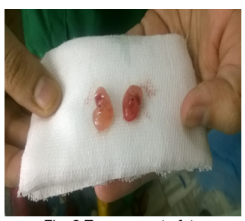

Fig. 2 Two separate fetuses

The fetal poles measurement was 8mm and 9mm, respectively. There was active bleeding from the ruptured area. The other tube was apparently normal. The right ovary was identified and appeared normal. Decision of right salpingectomy was then taken. Hemostasis achieved .Her postoperative care was uneventful. She received 1 pint packed red cells post-operatively. The patient was discharged 5 days after surgery. The histopathology of the specimen confirmed the diagnosis established in the operative field.

DISCUSSION:

Ectopic pregnancies account for 1% of all pregnancies, but represent a major health risk for women of childbearing capacity and can result in life-threatening complications if not treated properly.[1,5] The classic clinical triad of ectopic pregnancy is pain, amenorrhea and vaginal bleeding.[6] However, these symptoms may be seen in as few as 45% of ectopic pregnancy cases.

The incidence of ectopic pregnancies has been increasing since the 1970s. Multiple risk factors which contribute to the incidence of ectopic pregnancy are pelvic inflammatory disease, previous ectopic pregnancy, history of tubal surgery and conception after tubal ligation and use of fertility drugs or assisted reproductive technology. Other risk factors include use of an intrauterine contraceptive device, increasing age, smoking and congenital uterine anomalies.[5,7]

A delay in tubal transport of a fertilized ovum, caused by the above-mentioned risk factors, may contribute to the pervasiveness of unilateral twin ectopic implantations.[8]

It has also been proposed that early twinning of a fertilized zygote creates a larger than normal cell mass, retarding the transport along the damaged tube and leading to tubal implantation.[9]

Although the incidence of ectopic pregnancy has increased dramatically in the past 30 years, the maternal fatality rate has dropped by nearly 90% with the advent of early sonographic detection and highly sensitive serum beta-HCG tests.[10,11]

Unilateral twin ectopic pregnancies have not followed this increasing trend. Fewer than 30 cases have been diagnosed with sonography since 1986. Because only 5–10% of ectopic pregnancies are live, there are few descriptions of fetal cardiac activity in twin tubal gestations.[11]

Live twin ectopics gestations are extremely rare. The first case of live twin ectopics pregnancy was described in 1994.[12] A unilateral twin ectopic pregnancy is a rare occurrence which was first described in 1891 by De Ott.[3] The unilateral twin tubal pregnancy can occur

spontaneously.[13] A heterotopic pregnancy, in which an intrauterine pregnancy is coupled with an extrauterine gestation, is the most frequent type of twin ectopic gestation. This occurs spontaneously in 1 out of 7,000 pregnancies.[14] Although the majority of unilateral twin ectopic cases are assumed to be monozygotic, Neuman et al[15] reported results indicative of a dizygotic twin gestation with the use of DNA probes for restriction fragment length polymorphisms. They speculate that several of the unilateral ectopic twins originally thought to be monozygotic may have actually been dizygotic. There has been only 1 report of unilateral triplet tubal pregnancy after IVF and embryo transfer.[16]

The key to diagnosis of an ectopic pregnancy is determining the presence or absence of an intrauterine gestational sac with co-relation of serum ß-hCG levels. An ectopic pregnancy should be suspected when TVUS does not show an intrauterine gestation with a serum ß-hCG level of 1500 IU/L or higher. Women with ectopic pregnancies tend to have lower ß-hCG levels than those with normal intrauterine pregnancies; however, twin ectopic pregnancies have high levels of ß-hCG similar to normal intrauterine pregnancies. In our case, the ß-hCG level was 4600mIU/mL.

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.[17]

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.[18] The presence of other indirect signs, such as fluid in the Pouch of Douglas, free fluid in the pelvis or a pseudo sac in the endometrial cavity are helpful indicators in establishing the diagnosis. Other presentations could be an in-homogenous adnexal mass or an empty extra uterine sac with an empty endometrial cavity. Other rarer locations for an ectopic pregnancy could be in the cervical region or along the lower anterior segment of the uterine wall with myometrial dehiscence in a caesarean section scar.[19]

Color and Pulse Doppler can also help to differentiate a non-specific adnexal mass. The color flow pattern associated with an ectopic is variable, with a sensitivity of 73–69% and a specificity of 87–100%.[20,21] The color flow pattern appears as randomly dispersed multiple small vessels showing high velocity and low impedance flow signals (resistive index (RI) of 0.38–0.45), the classical ring of fire sign. However, women with tubal abortion demonstrate significantly higher impedance (RI of up to 0.60) and less prominent color flow in the trophoblastic tissue.

Treatment of an ectopic pregnancy depends on its clinical presentation, size and ß-hCG levels. It may entail conservative, medical or surgical intervention. Ectopic pregnancies can resolve spontaneously through regression or tubal abortion. Surgical management is reserved for patients who refuse methotrexate or have contraindications to medical treatment and those in whom medical treatment has failed or patients who are haemodynamically unstable. Laparoscopic treatment of ectopic pregnancy is associated with less operating time, shorter hospital stays and faster recovery.[7,22]

Salpingectomy is the recommended treatment; however, salpingostomy can be considered for women with one tube who are wishing to preserve their fertility.[7]

CONCLUSION:

A spontaneous unilateral twin tubal pregnancy can occur in patients who have no known predisposing factor. With the advancement of ultrasound technology and expertise, and the use of serum ß-hCG levels, earlier detection and management of ectopic pregnancy is achieved. Thus resulting in an increase in fertility in subsequent pregnancies.

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