Case Report

A Case Report of Bilateral Simultaneous Unruptured Tubal Ectopic Following Intra Uterine Insemination

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Abstract

Background
The incidence of ectopic pregnancy varies between 1.5-2% of all pregnancies. Bilateral tubal ectopic pregnancy is rare. It may occur in 1 per 20000 pregnancies. Ectopic is due to a number of factors like assisted reproductive technique, pelvic infection and tubal surgery. Although transvaginal scan has aided in early diagnosis , preoperative diagnosis is uncommon. Laparoscopy is the gold standard for diagnosis of Bilateral Tubal Pregnancy.

Case Report
Mrs XX 26/F, married 5 years , with regular menstrual cycles till date, a case of primary infertility reported to our centre on 10/2/2014. After basic evaluation, it was decided to proceed to ovulation induction and artificial insemination. She became pregnant second cycle of insemination; however she developed pelvic pain and was unfortunately, diagnosed as ectopic. The laparoscopy incidental findings were, bilateral, simultaneous unruptured tubal leaking ectopic gestation . In view of prompt diagnosis, hemodynamic stability, proper pelvic survey of contralateral tube, both her tubes could be saved during laparoscopy.

Conclusion
The bilateral ectopic came as a total surprise, it was a tough decision on preserving the tubes but by guideline, as they were intact ,bilateral salpingostomy could be done. A review of available literature suggests that there is no universally accepted management strategy towards this condition, and care needs to be tailored to the needs of the patient, patient's preferences and the clinical picture.

Keywords: Donor Insemination; HSG; Bilateral Ectopic; Salpingostomy; Salpingectomy; Laparoscopy

Abbreviations: BTP Bilateral Tubal Pregnancies; HSG Hysterosalpingogram; ART Assisted Reproduction Technique; IUI Intrauterine Insemination; HCG Human Chorionic Gonadotrophin; POD Pouch of Douglas

Introduction
Ectopic pregnancy is defined traditionally pregnancy outside the uterine cavity. It still stands as a leading cause of maternal morbidity and mortality. The incidence of ectopic pregnancy varies between 1.5-2% of all pregnancies. Bilateral tubal ectopic pregnancy is rare. It may occur in 1 per 200000 pregnancies [1,2]. The estimated incidence is 1 in 725 to 1 in 1580 of all ectopic pregnancies.

The first reported case in the literature was by Bledsoe in 1918. Totally, more than 200 cases of bilateral tubal ectopic pregnancy have been reported in the literature to date. Although transvaginal scan has aided in early diagnosis , preoperative diagnosis is uncommon.

Recently, the rising incidence of ectopic is due to a number of factors like assisted reproductive technique, pelvic infection and tubal surgery. The mechanisms of BTP may include multiple ovulation, transperitoneal migration of trophoblastic tissue from one tube to another and oocytes also , or superfetation [3].

Direct inspection of the contralateral tube in the operating room is the most effective method of diagnosing the second ectopic pregnancy. Laparoscopy is the gold standard for diagnosis of ectopic pregnancy, including BTP. The criteria for diagnosis of BTP were first suggested by Fishback [4] and later revised by Norris [5] who stated that microscopic demonstration of chorionic villi in each tube was sufficient for the diagnosis.

The last review of the literature on this subject was published by De Los Rios in 2007. Somewhat more than half of those cases were the result of Assisted Reproductive Technique (ART), including ovulation induction, intrauterine insemination, in vitro fertilization and embryo transfer (IVF-ET), transfer of gametes to the fallopian tubes, and intracytoplasmic sperm injections (ICSI) (6-8). Mostly
ectopic is a diagnosis of suspicion but this case is being reported here, for its rarity.

**Case Report Details**

Mrs XX 26/F, married 5 years, with regular menstrual cycles till date, had past history of a therapeutic dilatation and curettage in 2012 by a general practitioner, a case of primary infertility, reported to our centre on 10/2/2014.

The husband had a confirmed azoospermia report on semen analysis. Following detailed history, examination and discussion of existing reports, it was agreed to proceed with tubal evaluation by HSG and then proceed for donor insemination, in view of financial constraints.

HSG was done on 5/3/2014 day 7 of cycle, showing bilateral patent tubes, she went on a simultaneous ovulation induction with 100mg of clomiphene citrate from day 3, the first cycle of IUI with donor semen failed, with only one dominant follicle.

The second donor single insemination post inj HCG 36 hours later, was done on day 14 of the next month cycle when she developed 2 dominant follicles in the left ovary with clome 100mg and inj HMG 75 iu, two doses. LMP was 30/3/2014, she confirmed pregnancy on 4/5/2014.

She was admitted with pain in both iliac fossae on 5/5/2014 and mild bleeding pv. No H/O past pelvic surgery or pelvic infection. Her vitals were stable BP 110/80mm hg and pulse of 92/min. On examination of abdomen left iliac fossa was tender than right. On pelvic examination, there was cervical excitation pain and bleeding pv. Her beta hcg was 4527 on 5/5/2014.

Emergency trans vaginal scan showed no intrauterine gestational sac, both ovaries were normal, plenty of free fluid in POD. Left adnexal mass seen suggestive of 5 weeks pregnancy. As patient was stable, haemoglobin was normal, emergency laparoscopy was done; informed consent for salpingectomy was obtained also. Surgical management was decided in view of pain and high hcg levels.
The laparoscopy incidental findings were bilateral, simultaneous unruptured tubal leaking ectopic gestation. uterus and ovaries were normal. Left tube ampullary ectopic 3 x 1.5 cm and right tube ampulla seat of 2.5 x 1.5cm ectopic were noted. The bilateral ectopic came as a total surprise. It was a tough decision time, on preserving the tubes but by guideline, as they were intact, bilateral salpingectomy was done by using diathermy antimesentric incision applied, products of conception contents were removed by using a specimen retrieval bag and sent for histopathology. Saline irrigation and suction was then done to ensure haemostasis, suturing was not done. This case also provides evidence that transperitoneal migration of eggs is possible!

In view of prompt diagnosis, hemodynamic stability, proper pelvic survey of contralateral tube, both her tubes could be saved. Laparoscopy was possible, no blood transfusion was needed averted the accompanying risks. She was discharged the second post op day. Persistent trophoblastic tissue was being monitored by doing serum beta hCG.

Post op counselling was done to the couple about tubal patency testing, possible need for microsurgery and risk of recurrent ectopic. The option of in vitro fertilisation with donor sperm was also discussed although couple had financial problems. Four months post op, HSG was done to study tubal patency right tube showed local spill whereas left tube showed distal locking of dye and no free spill. The option of tubal microsurgery Vs ART was reinforced. The couple were considering donor embryo transfer also as they wanted to avoid surgery and cost.

**Discussion**

Bilateral ectopic pregnancy is difficult to diagnose preoperatively, indicating limitations of ultrasonography. The most common method of diagnosing the second ectopic is direct inspection of the contra lateral tube in the operating room or by laparoscopic examination routinely of the contra lateral tube to avoid the grave situation of a second ectopic [9]. A serial measurement of serum βhCG is necessary to rule out the risk of persistent trophoblastic tissue.

A review of available literature suggests that there is no universally accepted management strategy towards this condition, and care needs to be tailored to the needs of the patient, patient’s preferences and the clinical picture [10].

Conservative strategy seems to be preferred, whenever possible, to preserve patient’s fertility without increasing the risk of recurrence. In a study of these patients Rabishong et al observed, Intra Uterine Pregnancy rate was significantly higher after conservative treatment compared with salpingectomy. The 2-year cumulative rate of recurrences was 18.5% after salpingectomy or salpingectomy and 25.5% after medical treatment [11].

With ART pregnancies the ectopic rate is generally around 2.1% however varies with the type of ART procedure, it was higher when zygote intrafallopian transfer (ZIFT) was used (3.6%) and significantly decreased when donor oocytes were used (1.4%) or when a gestational surrogate carried the pregnancy, it was lowest (0.9%). [12,14]. Artificial donor insemination associated with ectopic per se is very rare and still rarer is bilateral simultaneous ectopic as in my case [13]. However, BTP is a diagnostic and management dilemma. The clinician must use his discretion sensibly in the interests of the affected patient so that the best can be done for immediate and long term outcomes.

**References**