THE INTERNATIONAL SOCIETY FOR GYNECOLOGIC ENDOSCOPY
PROMOTING VAGINAL SURGERY
ISGE accreditation
TM
The Trocar
Official Online Journal of ISGE

TheTrocar Volume 5 Issue 2 Page: 87-91 **ISSN: 2736-5530**

Transperitoneal migration of spermatozoa with Ruptured Ectopic gestation in a Unicornuate uterus (U4b)– A Case report (Video)

Author: Chirag Wagh[1]; Shinjini Pande[2]; Vivek Salunke[2]

Affiliation: 1 Dr Sumitrabai Wagh hospital Mumbai

2 Nalini Speciality hospital, Mumbai

Abstract

Objective: A rare case scenario of Transperitoneal migration of Spermatozoa with Ruptured Ectopic gestation in a Unicornuate uterus (U4b)– A Case report.

Design: Retrospective study - review of surgical procedure

Setting: Patient consent was taken. She was operated at a hospital in Mumbai. Procedure was done under general anaesthesia. Port configuration used was 1 supra umbilical 10 mm port for optics and 2 left sided ipsilateral 5 mm accessory ports for the surgery.

Intervention: Laparoscopic right salpingectomy with drainage of the hemoperitoneum

Conclusion: Demonstrating the laparoscopic findings in this rare case of ruptured tubal ectopic gestation and establishing evidence-based findings of transperitoneal migration of spermatozoa leading to ectopic gestation in the contralateral tube.

Key words: Ectopic pregnancy; Mullerian anomaly; Laparoscopic salpingectomy; transperitoneal migration; hemoperitoneum

Corresponding author: Chirag Wagh

DOI: 10.36205/trocarvid5.24003

Received 12.04.2024 – Accepted 25.05.2024

Introduction:

This case report describes a case of Transperitoneal migration of spermatozoa leading to an ectopic gestation.

The patient is a 29-year-old, Gravida 1 Para 0, Married for 2 years, no previous abortions or living issues.

She has not had any prior scans so is unaware of the congenital mullerian anomaly which had not been diagnosed prior to this episode of ruptured tubal ectopic pregnancy.

The patient had a congenital uterine anomaly of class U4b with Left sided Unicornuate uterus and the ectopic gestation was noted in the Right tube (on the side of the undeveloped uterine horn) which subsequently ruptured causing hemoperitoneum (as is seen in figure 1 and 2)

The patient underwent an emergency laparoscopic salpingectomy. (as is seen in Figure 3)

The patient was a 32-year-old with complaints of severe abdominal pain for 1 day and bleeding vaginally.

She had history of 6 weeks amenorrhea and a positive Urine pregnancy test. A 3D ultrasound confirmed the findings of a ruptured right tubal ectopic gestation with hemoperitoneum and a Mullerian anomaly of class U4b (Unicornuate uterus on the left side).

She was taken up for emergency Laparoscopic salpingectomy under general anesthesia and the Intra operative findings confirmed the diagnosis (Operative pictures attached)- as is seen in figure 4.

This suggests a pathogenesis of transperitoneal migration of sperm as has been recorded previously in literature as cited below. The right sided salpingectomy was performed and final histopathology of the specimen confirmed the diagnosis of an ectopic pregnancy.

The pathophysiology as suggested by the authors is that the sperms transmigrated through the uterus into the left patent fallopian tube and through the peritoneum to fertilize the ovum in the right sided fallopian tube to then lead to an ectopic pregnancy in the right tube as there is no direct pathway to the uterus from the right fallopian tube. The ovulation however could have occurred from either side as the ovum could be released into the pouch of Douglas in the peritoneal free fluid and then picked up by the sweeping motion of the fimbria of the right fallopian tube to then implant in the tubal epithelium. This appears to be the only logical explanation for occurrence of this rare phenomena as seen in this case report.

Review of literature

This case represents the phenomenon of contralateral sperm transperitoneal migration: sperm gaining access to the left oviduct after entering the peritoneal cavity via the right oviduct. The ovum from the left ovary after being successfully fertilized could not be transported into the uterine cavity due to the previous segmental resection, ultimately resulting in an ectopic pregnancy. [1]

Intraperitoneal sperm transmigration occurs approximately half the time in effecting spontaneous human pregnancies. To minimize the risk of ectopic tubal pregnancy in woman with unilaterally damaged fallopian tubes, salpingectomy should be the preferred surgical treatment, rather than attempting tubal salvage and repair.[2]

This is the first report of an intrauterine pregnancy following timed coitus, resulting from transperitoneal sperm and/or oocyte migration as the oocyte originated from an ectopic (undescended) ovary. [3]

The occurrence of ectopic pregnancy distal to complete tubal occlusion or separation (in a tubal segment without luminal continuity to the uterus) was explored among reported tubal pregnancies, particularly those following sterilization. Presumably such pregnancies result from transperitoneal migration of sperm.

Pregnancy occurring in a tubal segment without luminal continuity to the uterus without prior sterilization was only rarely reported.[4]

Congenital mullerian anomalies and their classification -

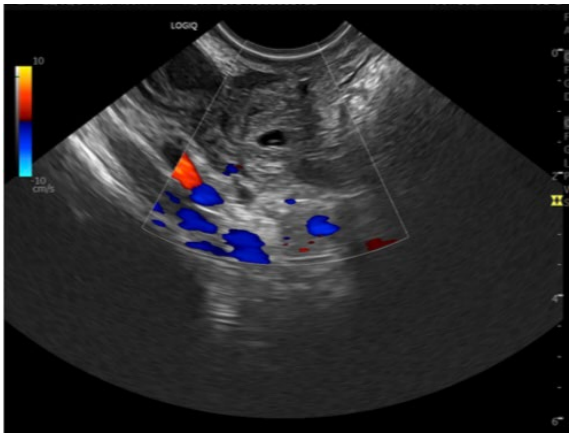

Figure 1: Ultrasound image of the tubal ectopic gestation in the right tube

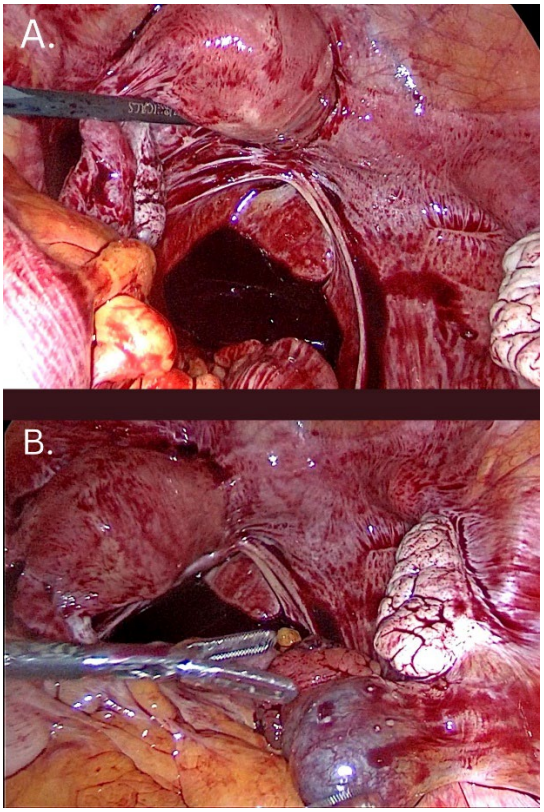

Figure 2

A) Shows the initial operative picture clearly demonstrating the Ruptured tubal ectopic gestation with Hemoperitoneum in the Pouch of Douglas. The Mullerian anomaly can be clearly identified and is seen as a normal well developed uterine horn on the left side with a normal left adnexal complex. The Right side however demonstrates absent uterus with rudimentary undeveloped horn and no cavity.

B) The right ovary is normal and the right sided tube shows the ectopic gestation of size about 3x4 cm with active haemorrhage through the fimbrial end. The Cornual side of the tube does not show any communication with the uterus suggesting an Etiopathogenesis of transperitoneal migration of the Sperm to then undergo implantation of the embryo in the right tube

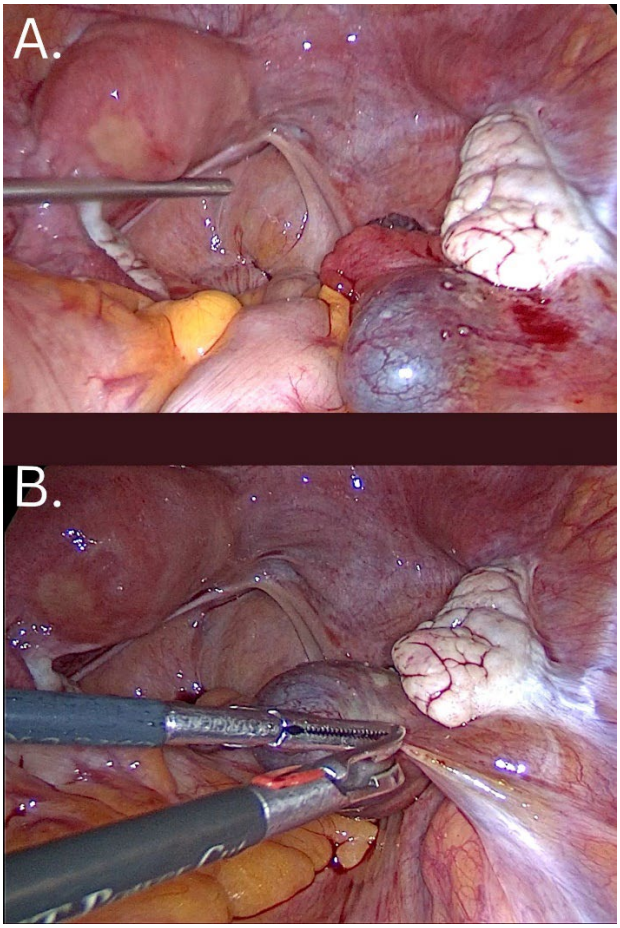

Figure 3

A Shows the laparoscopic view after giving a saline wash.

B Findings were confirmed and Right salpingectomy was done using standard

instruments

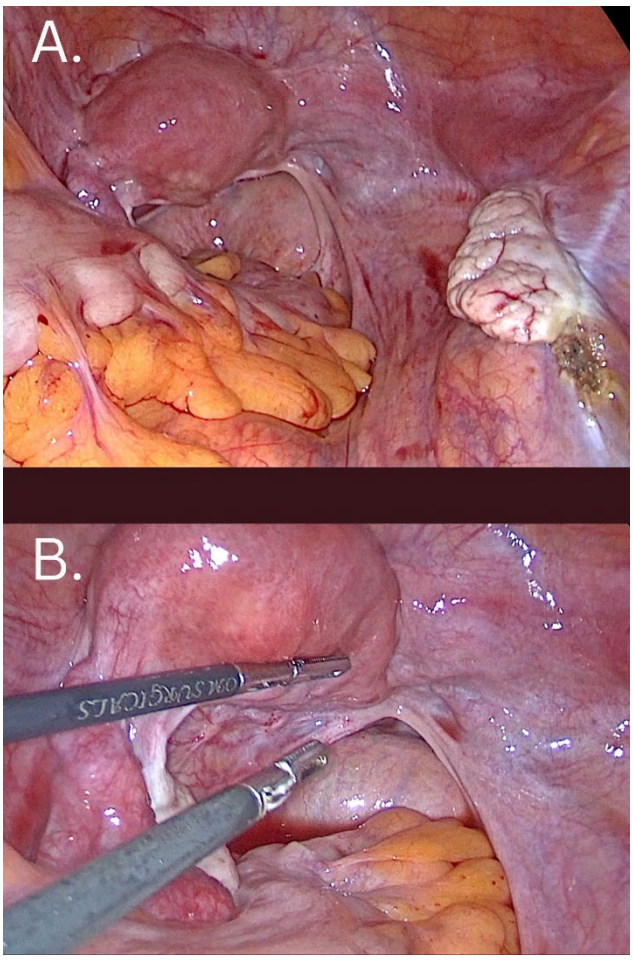

Figure 4

A- Shows the final operative picture after salpingectomy and thorough saline lavage.
B- The Unicornuate uterus is clearly visible with the rudimentary undeveloped horn on the right side. The specimen of the right tube was sent for histopathology and confirmed the diagnosis of ectopic pregnancy in the right tube.

References:

1. H. Ansari & E. S. Miller (1994) Sperm Transmigration as a Cause of Ectopic Pregnancy, Archives of Andrology, 32:1, 1-4,
2. Nahum GG, Stanislaw H, McMahon C. Preventing ectopic pregnancies: how often does transperitoneal transmigration of sperm occur in effecting human pregnancy? BJOG. 2004 Jul;111(7):706-14. doi: 10.1111/j.1471-0528.2004.00162.x. PMID: 15198762.
3. Willem Ombelet, Karen Deblaere, Martin Grieten, Geert Verswijvel, Martine Nijs, Piet Hinoul, Eric de Jonge,Intrauterine pregnancy following transperitoneal oocyte and/or sperm migration in a woman with an ectopic (undescended) ovary, Reproductive BioMedicine Online,Volume 7, Issue 1,2003,Pages 110-113,
4. Metz, Karel G. P. and; Mastroianni, Luigi JR.. Tubal Pregnancy Subsequent to Transperitoneal Migration of Spermatozoa. Obstetrical & Gynecological Survey 34(7):p 554, July 1979.