ECRONICON OPEN ACCESS

EC GYNAECOLOGY
Case Report

Tubal Abortion: Pitfalls in Diagnosis

Osemen Okojie*, Stephanie Smith and Dib Datta

Obstetrics and Gynaecology, Women and Children's, Maidstone, and Tunbridge Wells NHS Trust, Kent, United Kingdom

***Corresponding Author:** Osemen Okojie, Obstetrics and Gynaecology, Women and Children's, Maidstone, and Tunbridge Wells NHS Trust, Kent, United Kingdom.

Received: December 05, 2023; **Published:** February 14, 2024

Abstract

Tubal abortion is an uncommon occurrence following a tubal ectopic pregnancy, which can have life threatening implication such as massive haemoperitoneum. A high index of suspicion is required to make a diagnosis, in addition to corroborating clinical, laboratory, ultrasound, laparoscopic and histological findings.

This is a case of a lady who presented with worsening abdominal pain and a positive pregnancy test. Following a bedside pelvic scan, which revealed significant haemoperitoneum and no evidence of an intrauterine or extrauterine gestational sac, she had a diagnostic laparoscopy, confirming massive haemoperitoneum and no evidence of an ectopic pregnancy. On the second day post op, abdominal pain worsened and a drop in haemoglobin was noticed. A repeat scan revealed further haemoperitoneum. She underwent a second diagnostic laparoscopy which revealed massive haemoperitoneum and an Omental complex of blood and suspected trophoblastic tissue, which was confirmed on histopathology. There was a decline in the trend of serum BHCG, with a negative urine Pregnancy test 3 weeks after the second laparoscopy.

Tubal abortion is a diagnosis of exclusion. Ultrasound is of little to no importance in making a diagnosis but is useful in confirming haemoperitoneum. Diagnostic laparoscopy is vital in examining the peritoneal cavity and evacuating haemoperitoneum. Expectant management is usually possible in the face of declining serum hCG levels avoiding surgical or medical intervention.

Keywords: *Ectopic; Tubal Abortion; Laparoscopy; Serum bHCG*

Abbreviation

bHCG: Beta Human Chorionic Gonadotrophin

Introduction

The incidence of ectopic pregnancies in the UK is 11 per 1000 pregnancies [1], with an estimated mortality rate of 0.35 per 1000 pregnancies, accounting for the leading cause of pregnancy related first trimester deaths [2].

Timely early pregnancy unit referrals, widespread availability of serum beta HCG tests and pelvic scan have reduced the need for invasive surgery in carefully selected patients. This in turn reducing the morbidity and mortality from ruptured ectopic pregnancies [3].

A combination of clinical symptoms aided by diagnostic test is required to make a diagnosis of ectopic pregnancy. Early pregnancy pain and bleeding with a positive pregnancy test and ultrasound scan features such as an adnexa mass, fluid in the pouch of Douglas, greatly increase the suspicion of an ectopic pregnancy. The case is however different from a tubal abortion, which is largely a diagnosis of exclusion, in which there is a positive pregnancy test, clinical symptoms and signs suggestive of haemoperitoneum on scan, without any demonstrable extrauterine gestational sac.

We present a case of a tubal abortion and haemoperitoneum requiring repeated diagnostic laparoscopies.

Case Report

The patient was a 31-year-old Para 1, previous emergency caesarean section 11 months prior to presentation. She had a progesterone implant fitted about 3 weeks prior to first presentation. She had undergone a previous uncomplicated laparoscopic appendectomy, had B thalassaemia trait and was managed by the haematologist for thrombocytopaenia.

She presented at the emergency gynaecology assessment unit at 2100 hours with lower abdominal pain and a positive urine PT, she was unsure of her last menstrual period. Pain score 9/10. She had no bleeding, no shoulder tip pain and did not feel faint. Her abdomen was found to be soft and not tender on examination and no significant findings on vaginal and speculum examinations. Her vital signs were normal, and her haemoglobin was 116 g/l.

She was counselled and reassured and booked for a scan as soon as possible. Pain was controlled on analgesia, and she was discharged home to present for scan and safety netted.

She subsequently represented at 0400hr the following morning with worsening pain and no bleeding. Vital signs, heart rate 102 bpm, blood pressure 123/83 mmhg, respiratory rate 18 cpm, O_2 sats 98%, temperature 36.8°C and a pain score of 10/10. There was generalized tenderness on palpation.

Vaginal examination was unchanged from the previous findings. She had a bed side scan which showed no gestational sac seen within the uterus. However, there was fluid in the pouch of Douglas. Haemoglobin had dropped to 100 g/l and serum B-hCG was 3950 IU/L. A diagnosis of suspected ruptured ectopic pregnancy was made.

She was counselled on the findings and consented for a diagnostic laparoscopy plus proceed. Findings at surgery; omental adhesion, from anterior abdominal wall to left pelvic side wall, normal fallopian tubes, and ovaries. Haemoperitoneum approximately 1000 ml and no ectopic pregnancy seen. Haemoperitoneum was suctioned and a peritoneal washout was done. A tentative diagnosis of tubal abortion was made. Following surgery, she was transfused with 2 units of red blood cells and post transfusion haemoglobin was 98 g/l.

Serum beta hCG on the 1st day post op was 3894 IU/L. She did well post op and the plan was to keep her on admission for another 48 hours and repeat the serum b HCG.

On the 3rd day post op, she complained of lower abdominal pain. There was no obvious abdominal distention, and her vital signs and abdominal examinations were unremarkable. Her haemoglobin had dropped from 98 g/l to 77 g/l, platelets 63,000 and the findings from an urgent pelvic scan revealed; no gestational sac seen within the uterus, evidence of fresh blood and blood clot in the pelvis, deepest pool of 6 cm. Within the right adnexa was an area of organized solid echoes measuring 61 x 45 x 52 mm, this may represent a possible ectopic pregnancy. Serum beta HCG had further dropped to 1557 IU/L.

She was counselled on the current clinical situation and consented for a diagnostic laparoscopy plus proceed. The surgeons where informed who joined in theatre. Findings at surgery included haemoperitoneum of 1.5 litres, normal uterus, tubes, and ovaries (Figure 1), an omental mass in the right adnexa measuring approximately 5 x 5 cm, bleeding, with suspected trophoblastic tissue attached to the omentum (Figure 2). She had excision of the omental mass with a haemostatic cutting device, adhesiolysis, drainage of haemoperitoneum and had a pelvic drain inserted. She was further transfused with 2 units of blood and 1 unit of platelets. Histologic examination of the omental mass revealed piece of fatty tissue 80 x 55 x 30 mm with adherent haemorrhagic material. The surface has a variable fatty and congested appearance. Adipose tissue with adherent blood clots containing chorionic villi. There were no molar changes or other trophoblastic anomaly.

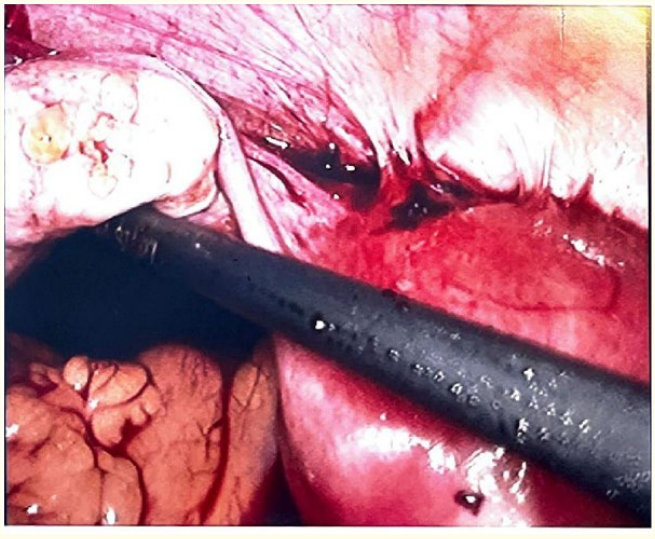

Figure 1: *Grossly normal left tube and ovary.*

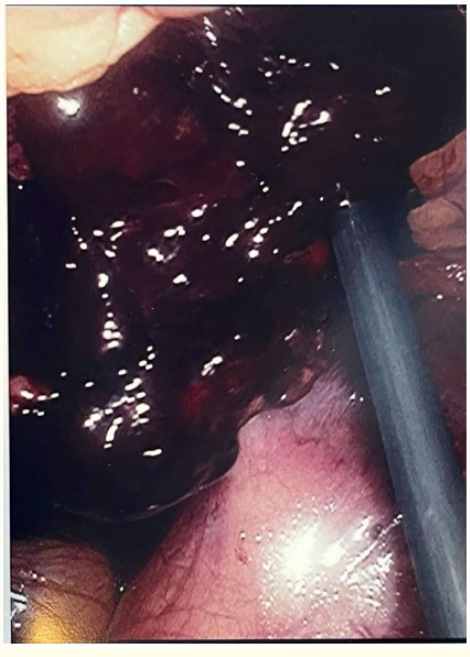

Figure 2: *Omental complex.*

Serum beta HCG further dropped to 321 IU/L on the 2nd day post the 2nd laparoscopy.

Haemoglobin and platelets where stable at 100 g/l and 121,000, respectively. The pelvic drain was removed, and she was discharged home to have a urine pregnancy test done in 3 weeks, which was negative.

Discussion

The typical patient with a tubal abortion, will usually present in the same way as a tubal ectopic pregnancy would, with the same risk factors as an ectopic pregnancy. It is particularly interesting to note that this patient had a progesterone implant in-situ as at the time she presented with a positive pregnancy test. Overall, Progesterone implants protect against ectopic pregnancy due to its effective nature in preventing pregnancies in general, however a study showed an incidence of ectopic pregnancies of 0 - 2.9/1000-woman years in studies of marketed levonorgestrel implants [4].

The true incidence of tubal abortion is unknown; however, it has been reported that 2.5% of tubal ectopic pregnancies will end in tubal abortions [5]. There are no known risk factors that may account for the retrograde progression of a tubal ectopic to a tubal abortion. Although, no formal descriptions have been made, an old school of thought maintains that tubal ectopic gestations close to the fimbrial end of the tube, may be caused to be extruded following a digital bimanual vaginal examination.

Tubal abortion can be complete or incomplete and can be followed by complete absorption of the gestational sac and trophoblastic tissue or re-implantation in the abdominal cavity [6,7] as was the case in this patient. It is assumed that following the first surgery, the ectopic pregnancy tissue implanted onto the omentum, which was not noticed during the first laparoscopy. There was likely trophoblastic invasion and subsequent bleeding and haemoperitoneum. This is a plausible explanation due to the high vascularity of omental tissue. Prior to the second laparoscopy, a transvaginal ultrasound, revealed a possible right adnexal ectopic pregnancy, which presented a diagnostic dilemma and was found to be the omental complex, close to the right adnexa. Ultrasound examination is not particularly helpful in establishing the diagnosis of tubal abortion; however, it helps in identification of haemoperitoneum [4].

In tying together the findings at laparoscopy, downward trend of serial beta HCG samples and histological findings, the diagnosis of tubal abortion was clinched in this patient.

Laparoscopy remains the mainstay in the management of a suspected tubal abortion. It is important for a systematic and meticulous examination of the peritoneal cavity and organs and probably most importantly evacuation of the haemoperitoneum, which is a risk factor for adhesions and subfertility down the line.

Conclusion

Tubal abortion is a diagnosis of exclusion. A high index of suspicion, keeping in view the broader picture of clinical symptoms, laparoscopic findings, serum beta HCG trends and histological findings is necessary to make a diagnosis. Expectant management is usually possible, avoiding salpingectomy and medical management.

Consent Statement

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy" on the title page of the manuscript.

Conflict of Interest

No conflict of interest to declare.

Bibliography

1. Centre for Maternal and Child Enquiries (CMACE). "Saving mothers' lives: reviewing maternal deaths to make motherhood safer: 2006-08. The eighth report on Confidential Enquiries into Maternal Deaths in the United Kingdom". *BJOG: An International Journal of Obstetrics and Gynaecology* 118.1 (2011): 1-203.

2. Sivalingam Vanitha N., *et al*. "Diagnosis and management of ectopic pregnancy". *The Journal of Family Planning and Reproductive Health Care* 37.4 (2011): 231-240.

3. Thornton J. "Women are at serious risk of harm from late diagnosis of ectopic pregnancy". *British Medical Journal* 368 (2020): m924.

4. Callahan R., *et al*. "Ectopic pregnancy with use of progestin-only injectables and contraceptive implants: a systematic review". *Contraception* 92.6 (2015): 514-522.

5. Chirculescu B., *et al*. "Complete tubal abortion: A rare form of ectopic pregnancy". *Chirurgia (Bucharest)* 112.1 (2017): 68-71.

6. Tulandi T. "Ectopic pregnancy: Clinical manifestations and diagnosis" (2016).

7. Porwal S and Gupta R. "Secondary abdominal pregnancy following tubal abortion: a unique case". *Journal of Pharmaceutical and Biomedical Sciences* 16.6 (2012): 1-2.

Volume 13 Issue 3 March 2024