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Post Ivf Interstitial Viable Ectopic Pregnancy After Bilateral Salpingectomy. Case report.

Aida Orujova* and Thair S Abdulla

Department of Radiology, AL Ahli Hospital, Qatar.

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***Corresponding author:** Aida Orujova, Department of Radiology, AL Ahli Hospital, Qatar.

Abstract

Interstitial ectopic pregnancy is a rare condition. It is associated with high risk of maternal morbidity and mortality due to delayed diagnosis, advanced growth with further possible uterine rupture and massive hemorrhage. The presence of bilateral salpingectomy adds complexity to the diagnosis and further management as the absence of fallopian tubes alters the typical pathophysiology of ectopic pregnancies. Here, we report a case of a 47-year-old woman with a history of bilateral salpingectomy who developed an interstitial ectopic pregnancy following IVF. The diagnosis was confirmed by laparoscopy and the patient underwent surgical intervention with resection of ectopic pregnancy.

Keywords: Fallopian tubes; Ectopic pregnancy; Uterine rupture; IVF

Introduction

Ectopic pregnancy is defined as pregnancy that implants outside the uterine cavity. Ectopic pregnancy occurs approximately one in 80 pregnancies. Majority of ectopic pregnancy cases happens in the fallopian tubes, counting more than 90% of ectopic pregnancies. Most frequently tubal implantation occurs in the ampullar portion (73.3%) Second by frequency is isthmical portion (12.5%), then fimbrial (11.6%) and interstitial which occurs at the interstitial portion of tube where it enters uterus accounting 2.6% of all ectopic pregnancy cases. (Figure 1) The other sites for ectopic implantation are C-section scar defect, ovaries, cervix [1]. The incidence of ectopic implantation is higher with use of in vitro fertilization assisted reproductive technique compared to spontaneous cases. Other risk factors include previous tubal surgery, pelvic inflammatory disease, some sexually transmitted diseases (Figure 2). We presenting a case of IVF induced interstitial ectopic pregnancy with live embryo after bilateral salpingectomy. It is a rare case, especially with viable ectopic gestation.

Presentation of Case

A 47-year-old woman with history of bilateral salpingectomy due to previous 3 ectopic tubal pregnancies (one was on medical treatment, two were treated surgically) presented to Ob/Gyn clinic with complain of mild lower abdominal pain. No vaginal bleeding [2]. Patient had successful IVF procedure few weeks ago with single embryo transfer and confirmed positive pregnancy test. Her serum quantitative BhCG level was 3000 mIU/mL two days before visit. At the day of visit pregnancy test was repeated accounting 5150 mIU/mL. Combined transabdominal and transvaginal ultrasound revealed absence of intrauterine pregnancy with evidence of minimal hypoechoic hemorrhagic fluid within the uterine cavity. Eccentric heterogeneous focal mass detected in the right uterine (Figure 3) cornu contain gestational sac with single viable embryo (Figure 4) inside consistent with interstitial ectopic pregnancy. Echogenic line noted extending from the mass towards uterine cavity (interstitial line sign). CRL measurement was 4.2 mm corresponding to 6 weeks 1-day gestational age [3]. Positive cardiac activity confirmed on Color and pulse Doppler with fetal heart rate 111 bpm. Right ovarian corpus luteum cyst was also noted. No free fluid detected in the pouch of Douglas. The patient was hemodynamically stable, no acute symptoms (Figure 5).Laparoscopy was performed with visualized right interstitial ectopic pregnancy. Laparoscopic findings included: Right undisturbed interstitial ectopic pregnancy, absent right fallopian tube, normal right ovary. Presence of Proximal part of left fallopian tube, normal left ovary. Adhesions of anterior uterine wall to anterior abdominal wall and bladder [4]. Resection of right uterine (Figure 6) cornua was performed; the pregnancy was

successfully removed with careful preservation of the surrounding uterine tissue. Intraoperative decision was taken to remove also remnant part of the left fallopian tube in order to prevent possible complications of ectopic recurrence in potential future pregnancy. Patient tolerated procedure well and has been discharged on second day in stable condition. Follow up with decreased BhCG level was done at the next day.

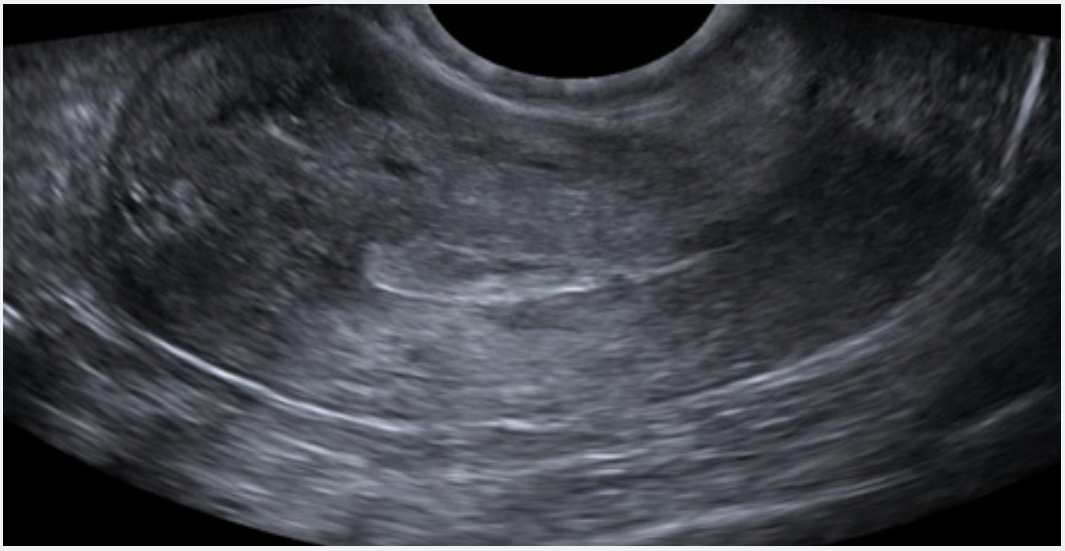

Figure 1: sagittal view of uterus. No evidence of intrauterine gestational sac. Minimal intracavitary free fluid.

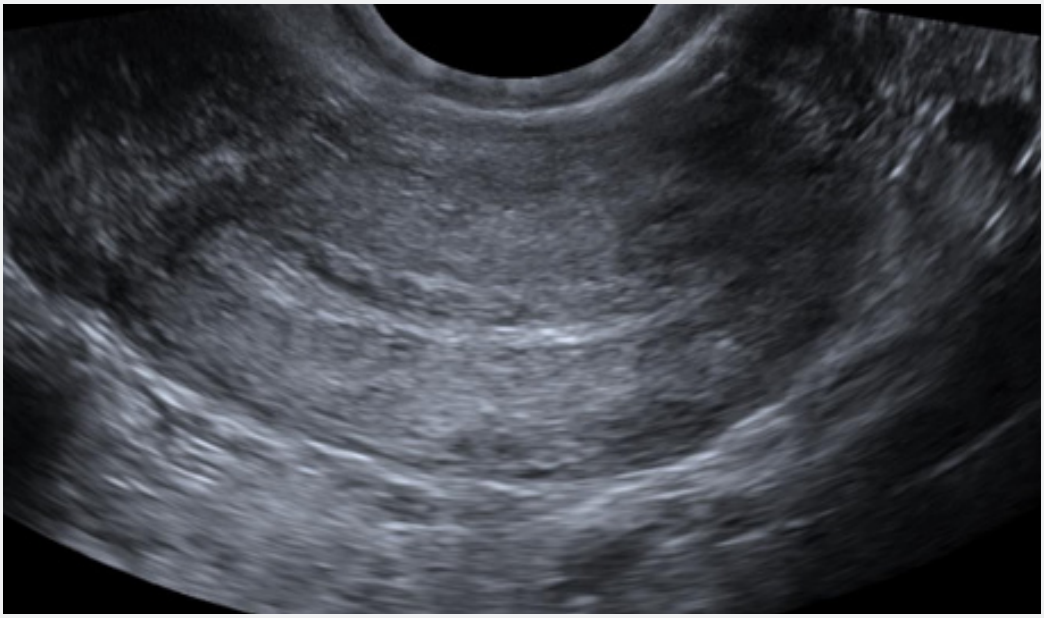

Figure 2: transverse view of uterus. No evidence of gestation sac in the uterine cavity.

Histopathology Diagnosis

Right interstitial ectopic pregnancy with extensive endometriosis seen in tubal walls. Left fallopian tube excision with paratubal cysts and endometriosis.

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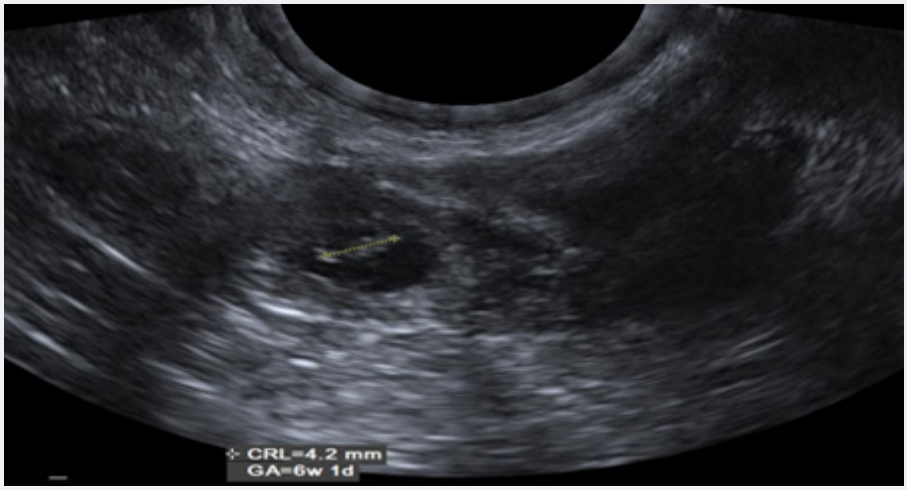

Figure 3: Right uterine cornu ectopic pregnancy with CRL corresponding to 6 weeks 1-day gestational age.

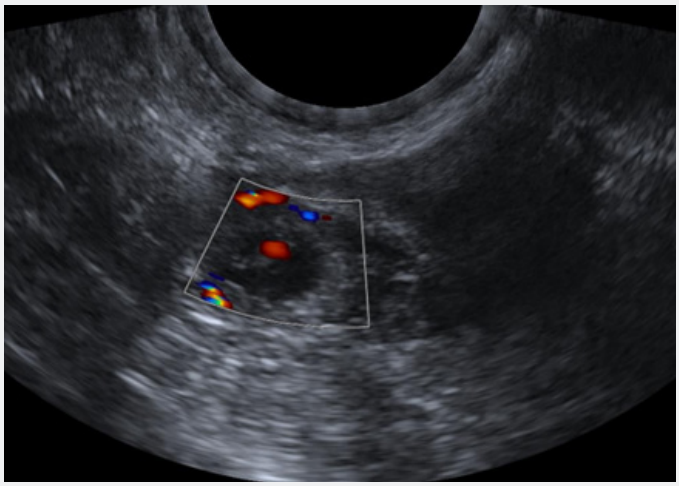

Figure 4: Viable embryo within the gestational sac.

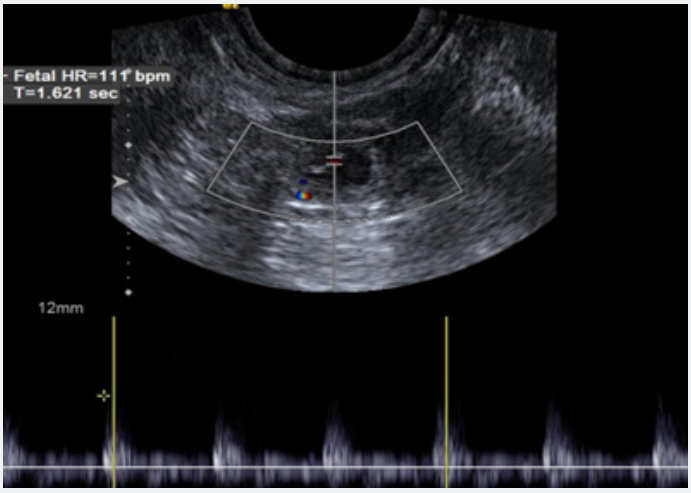

Figure 5: Positive fetal cardiac activity with FHR 111 bpm.

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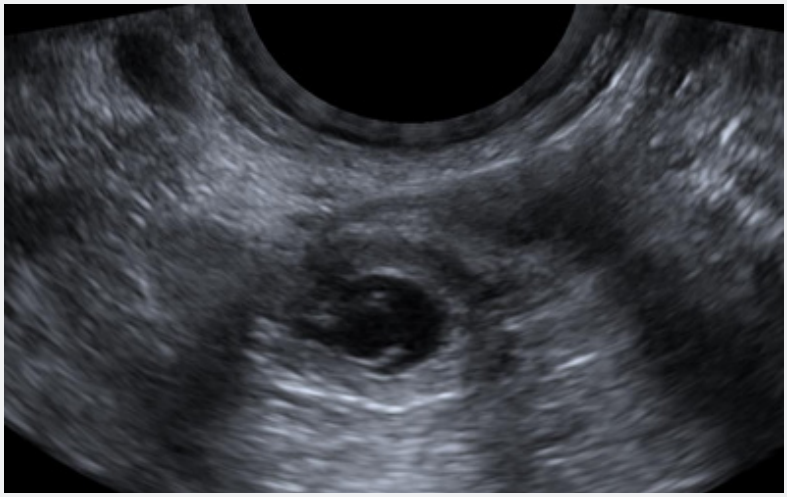

Figure 6: Right uterine cornu gestational sac containing yolk sac and adjacent fetal pole.

Discussion

An interstitial ectopic pregnancy is rare but danger type of extra uterine pregnancies (about 5%of all tubal pregnancies). It is defined by the implantation of fertilized ovum in the interstitial portion of the tube, located in the uterine cornua. This condition presents a unique challenge associated with high rate of complications as it can lead to uterine rupture, sever hemorrhage and significant maternal morbidity and mortality if not diagnosed and treated promptly. Risk factors for interstitial ectopic pregnancy includes previous ectopic pregnancy, endometriosis, pelvic inflammatory disease, history of salpingectomy, IVF procedure, ovarian stimulation [5]. In our case patient has history of bilateral salpingectomy due to previous 3 tubal ectopic pregnancies, endometriosis and undergone recent IVF procedure, however presented with only mild lower abdominal pain without vaginal bleeding or lower abdominal tenderness. She was hemodynamically stable and presented in outpatient clinic with no evidence of acute symptoms.Timely diagnosis of our case of live ectopic interstitial pregnancy was done by TVS imaging of heterogeneous mass in the uterine cornua and serum BHCG level with mild clinical background symptoms. This case highlights the importance of considering atypical presentations of ectopic pregnancies, even in patients who had undergone bilateral salpingectomy. Despite having successful IVF confirmed with positive BHCG levels, possibility of complications as ectopic pregnancy should never be disregarded and careful management of the case should be considered [6]. Management of interstitial ectopic pregnancies can be challenging. Surgical options include conservative management with resection of ectopic tissue, or, in more severe cases, hysterectomy. The decision depends on the size and location of the ectopic pregnancy, as well as patient's desire for fertility preservation. In our case, conservative surgery been performed with resection of ectopic pregnancy and preservation of the uterus. Resection of the remnant portion of left tube was also performed in order to prevent future possible complications. Patient had followed up consultation 4 weeks after surgery with counseling future reproductive options.

Conclusion

Interstitial Ectopic pregnancies have high potential for maternal morbidity and mortality, therefor should be handled with timely and accurate diagnosis followed by careful management of each case to prevent complications such as uterine rupture and massive hemorrhage. Detailed ultrasound scanning, serial BHCg level monitoring and considering possibility of ectopic pregnancy even in patients with previous bilateral salpingectomy are crucial for early diagnosis and decision of appropriate surgical intervention and positive outcome.

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