CASE REPORT

Unruptured alive tubal ectopic pregnancy at 13 weeks of gestation: A case report; review of literature and management options

Atifa Afsheen Sharique, Mohammed Shehab, Muhammad Sharique, Shahela Nasir

Abstract:
A progressive second-trimester tubal ectopic pregnancy came across infrequently because almost all ectopic pregnancy has diagnosed at an early stage. The present case was a 37-years old lady presented with 13+4 days gestational amenorrhea and with lower abdominal pain, vomiting and loose motion. The Bed side ultrasound revealed 13 weeks size of an extra uterine gestational sac with a single viable fetus, and moderate blood in a pouch of Douglas. The differential diagnosis was either an abdominal versus a complicated tubal pregnancy. The patient had a successful laparotomy and left salpingectomy done. So, it is an unusual case of large unruptured alive ectopic pregnancy at 13 weeks of gestation.

Keywords:Tubal ectopic pregnancy, cessarian section, gestational amenorrhea, salpingectomy,

Received
date: 2nd February 2020
Accepted
date: 1st September 2020

Prince Sultan Military Hospital, Taif Region Kingdom of Saudi Arabia.
AA Sharique
M Shehab
M Sharique
S Nasir

Correspondence:
Dr Atifa Afsheen Sharique
Prince Sultan Military Hospital, Taif Region
Kingdom of Saudi Arabia.
Cell No:00966549958273
email: dratifa2000@gmail.com

Introduction:
An ectopic pregnancy is any pregnancy implanted outside of the endometrial cavity. In the UK, the incidence is approximately 11/1000 pregnancies.[2] The most common site of the ectopic pregnancy is the fallopian tubes. The other places of implantation include the ovary, cervix, caesarean-section scar, and the abdomen.[1] Recently, most ectopic pregnancies have been diagnosed at an early stage because of the progress of transvaginal sonography. Consequently, second-trimester tubal pregnancies are rarely encountered3. Several risk factors for ectopic pregnancy have been identified including pelvic inflammatory disease, smoking, and, previous ectopic pregnancy. Other factors, such as age, surgical history, and obstetric history, are also thought to be involved.[4]. Commonly, the patient presents with abdominal pain, amenorrhea, and sometimes vaginal bleeding. The patient may have an atypical presentation or even be asymptomatic in the earlier stages.[1]

Case Report:
We present the case was a 37-years old, gravida 2 with a history of previous one caesarean section. Who presented to the emergency department with lower abdominal pain, vomiting and loose motion with no significant medical, surgical history, and use of any contraception, on 17 December 2019. The patient's previous menstrual cycle was regular until 13 weeks ago, then a pregnancy test became positive. She visited in the antenatal clinic, on several occasions and found to be the pregnancy of unknown location with very high ß-HCG levels of 25,000U/l at nine weeks gestational age. She has offered diagnostic laparoscopy; however, she refused for it. Subsequently, she had a history of mild bleeding at ten weeks, but she did not seek any medical advice for that.

The patient described that lower abdominal pain is diffused and constant in all over the abdomen, with no shoulder tip pain, associated with four episodes of non-bilious, non-bloody vomiting and one episode of loose motion, with no incident of vaginal bleeding now. Clinically, the patient presented with pulse rate 130beats/minutes, blood pressure was 100/70mmHg, respira-

tory rate was 20, there was no fever and oxygen saturation on room air was 98%. The patient was fully conscious but was anxious and in pain. Her chest was clear, with no associated sounds. On palpation, the abdomen was slightly distended and diffusely tender with guarding and no rigidity. The per-vaginal examination showed positive cervical excitation; however, the size of the uterus and adnexal palpation was unsatisfactory due to deep tenderness. The conventional bedside ultrasound showed an extrauterine gestational sac on the left side with a viable fetus and empty uterus. The patient refused for a transvaginal ultrasound. The moderate fluid in the pouch of Douglas was noted and could represent oozing or rupture of the gestational sac. There were no blob or bagel sign. Beta-human chorionic gonadotropin (ß-HCG)came out 31470 U/l and Haemoglobin was 10.0gm/dl, the WBC count and C-reactive protein were high, and coagulation profile, renal function tests and liver function test were within normal limits.

The differential diagnosis was either an abdominal pregnancy or a complicated tubal pregnancy. The patient had an exploratory laparotomy due to fear of any unexpected bleeding because of the advanced pregnancy.At the time of surgery, we found there was a left ampullary unruptured alive tubal pregnancy with leaking of blood from that tube. There was a collection of 700ml of blood clots in the abdominal cavity.

In previous reports of tubal pregnancy after 12 weeks of gestation, almost all cases had adnexectomy performed. In our case, we preserved the affected ovary by prompt identification of the line of cleavage and only left salpingectomy done. In the presence of anaemia and increased heart rate, the patient received blood products. During the postoperative period, the patient recovered and did not suffer any complications. She was discharged home on the 2nd day postoperatively.

Discussion:

The incidence of ectopic pregnancy in women attending early pregnancy units is 2-3%.[5,6] Unfortunately, women still die from an ectopic pregnancy. However, the case fatality rate has decreased over recent years, suggesting that earlier diagnosis and treatment may have made an impact.[2] A report published in 2017 stated that approximately 5% of all maternal deaths had directly connected to ectopic pregnancy.[7] A paper published in Pakistan reported that frequency of tubal rupture was 100% up to 9-10 weeks of gestation in an analysis of 80 patients and it has noted that increasing gestation age cause increase in the frequency of tubal rupture.[8] Cases of large ectopic pregnancies, other than the fallopian tube, have been previously published, which are accommodating and more distensible for a developing fetus.[9-11] However, there is limited literature on large tubal ectopic pregnancies. There are not many publications detailing a tubal pregnancy of over ten weeks, as seen in this case report.

A report published in 2015 described a non-ruptured twin tubal ectopic pregnancy with the fetal crown-rump length of 2 cm.[12] There was also a report of a bilateral tubal ectopic pregnancy with unruptured gestational sacs of over four cm.[13]

In 2019, the previous largest ruptured tubal pregnancy reported, A 39-year-old woman presented with several fainting attacks, abdominal pain, and vaginal bleeding. Her beta-human chorionic gonadotropin (BHCG) level was 55713 IU/L Ultrasound showed a right adnexal mass. The biparietal diameter (BPD) of the fetus measured 2.2 cm, corresponding to 13 weeks of gestation. Emergency laparoscopic surgery was performed3. However, after this in 2020, the case of the largest tubal ectopic pregnancy reported in its 14th week of gestation. The patient's beta-human chorionic gonadotropin (ß-HCG) level was 56748 IU/L. The biparietal diameter (BPD) of the fetus measured 2.47 cm, corresponding to 14 weeks and two days.[14]

While the diagnostic technique has improved over time, it is not without error, and cases such as in our case can go unnoticed. Ultrasound is not necessarily able to detect intrauterine pregnancies below the beta-HCG discriminatory

zone (1500–2000 IU/L), and thus levels are redrawn 48 h before management has started in suspected cases.[15]

Management options: Expectant management: If initial BHCG is <1000-1500 IU/L and value is decreasing, then it can be an option with follow-up BHCG at Day 2,4 and 7.

Medical management: The Gestations that sonographically appear as extrauterine lesions measuring smaller than three and a half cm in hemodynamically stable, ß-HCG less than 1500IU/L, women may be amenable to the non-invasive medical treatment with methotrexate

Surgical management: Is an option if ectopic pregnancy with significant pain, with an adnexal mass of three and a half cm or larger, with a fetal heartbeat visible on an ultrasound scan and with a serum hCG level of 5,000 IU/litre or more.

When surgical treatment indicated for women with an ectopic pregnancy, consider laparoscopically whenever possible as these options are less invasive than open surgery. Offer a salpingectomy unless they have other risk factors for infertility. The salpingotomy carries an increased risk of persistent trophoblast compared to salpingectomy; thus, it is essential to monitor beta-HCG following surgery.[16]

The extensive hemoperitoneum reported in this case validates well the life-threatening nature of ectopic pregnancy and related increased risk with higher gestational age.

Conclusion:

We reported the un-ruptured case of viable ectopic tubal pregnancy at 13 weeks gestation that has successfully managed with laparotomy. Bedside ultrasound has a vital role in the diagnosis of ectopic pregnancy. It also illuminates an opportunity for higher patient education regarding the potential for ectopic pregnancy, the related signs and symptoms, and the overall position of early and constant prenatal care for prompt recognition and decrease of maternal morbidity and mortality.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. The patient has provided consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published.

Conflict of interest: None

Funding source: None

Role and contribution of authors:

Dr Atifa Afsheen Sharique: participated in data collection, drafted the manuscript, and participated in revising the manuscript

Dr Mohammed Shehab: participated in data collection and revising and approval of the final document

Dr Muhammad Sharique: participated in drafting and revising the manuscript.

Dr Shahela Nasir: participated in drafting and revising the manuscript.

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