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Case Report

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Caesarean Section Scar Ectopic Pregnancy: A Case Report

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Abstract

Background

Cesarean section scar ectopic pregnancy is recognized rare pregnancy complication which occurring in the myometrium of a previous scar of cesarean delivery with estimated rate one in 2000 pregnancies.

Various management modalities for CSEP depend on the case presentation ranges from expectant or conservative management, medically with methotrexate, or surgical excision by hysteroscopy or laparoscopy or laparotomy, vacuum aspiration can be used to remove the ectopic scar.

Methods And Patient

A case report of caesarean section scar ectopic pregnancy presented at obstetrics and gynecology department in Tripoli university hospital on 5th September 2022, which experience profuse vaginal bleeding, drowsy, pallor her hemoglobin concentration was 7.6 g/dl and Beta HCG at admission was 5664 mIU/ml with history of insufficient antenatal care compliance on current pregnancy that confused the diagnosis of CSSEP for incomplete abortion. The patient undergone individual management and follow up till became significantly heath condition improved either clinically or laboratory

Comments

The cesarean scar ectopic pregnancy is considered as a rare type of ectopic pregnancy with difficult diagnosis and individual management according to health situation at presentation.

Therefore, early recognition and proper assessment of CSEP is critical to achieve adequate management and to reduce related maternal morbidity and mortality.

Keywords: Caesarean section scar ectopic pregnancy, ectopic pregnancy, Beta HCG, methotroxate, MRI, Libya

Introduction

Ectopic pregnancy had defined as any pregnancy that implants in a site rather than the uterine endometrium. Although, most of ectopic pregnancies located in the fallopian tube but also can implant in the cervix, ovary, uterine cornua and abdomen [1, 2].

Cesarean section scar ectopic pregnancy is recognized rare pregnancy complication which occurring in the myometrium of a previous scar of cesarean delivery with estimated rate one in 2000 pregnancies [3, 4].

This incidence rising steadily because of increasing the rate of cesarean deliveries over the last few decades with estimated worldwide incidence for primary cesarean section about 18.6% of all births but CSEP risk not

necessarily to be influenced by the number of previous caesarean sections [5-11].

This mechanism probable can be explained by scar implantation due to myometrium invasion through a microtubular tract between the cesarean section scar and the endometrial canal; the decidua basalis damage during uterine surgery can be persist in the endometrium as tiny dehiscent tracts or small wedge defects [9].

There are two recognized types of hysterotomy scar ectopic pregnancies. Type 1 occurs in the myometrium and grows toward the uterine cavity while type 2 progresses toward the uterine serosa exophytically and the Type 2 have ominous diagnosis because of possible subsequent complications such as spontaneous uterine rupture, hemorrhage, potential fertility loss and maternal death [8].

The clinical presentation of CSEP includes pelvic pain and vaginal bleeding in the first trimester but also can be detected in many asymptomatic women, transvaginal ultrasound consider as the investigation of choice, which may be combined with a transabdominal scan for a panoramic view [3].

The magnetic resonance imaging (MRI) can be used in equivocal cases to confirm or refute the diagnosis [3].

Therefore, improving diagnostic technique measures such as advance sonographic and radiological imaging essential to achieve early diagnosis and overcome health issue [6, 7].

Various management modalities for CSEP depend on the case presentation ranges from expectant or conservative management, medically with methotrexate, or surgical excision by hysteroscopy or laparoscopy or laparotomy, vacuum aspiration can be used to remove the ectopic scar [4, 12, 13].

The aim of this study to demonstrate the caesarean section scar ectopic and its individual management at obstetrics and gynecology department in Tripoli university hospital.

Methods And Patient

On 5th September 2022, at 12:30 AM, Tripoli, Libya. A 34 years old pregnant woman at 10 weeks and five days gestation, gravida six, para five, previous four C/S, diabetic on insulin therapy, presented to obstetrics and gynecology department complaining of profuse vaginal bleeding with insufficient antenatal care compliance on current pregnancy.

On evaluate physical examination patient apparent pallor and drowsy, her vital signs revealed blood pressure was 80/60 mmhg and pulse was110 bpm.

The abdominal examination detected suprapubic tenderness and per vaginal examination demonstrated one cm opening at cervical so with manifested bleeding.

The trans abdominal ultrasound revealed abnormal irregular intrauterine gestational sac.

The patient immediately admitted and promptly managed by insertion of two large pore cannula and had received oxytocin 20 IU in normal saline infusion and sublingual misoprostol 400 mg.

On perform Beta HCG at admission was 5664 mIU/ml and on assessed her complete blood count the hemoglobin concentration was 7.6 g/dl (reference range: 12 - 18 g/dl), the patient promptly arrived to operation room for evacuation and curettage under general anesthesia.

Intra operative evacuation and curettage under general anesthesia with abdominal ultrasound guidance initiated to remove conception parts but difficulty faced on removing the part around anterior lower segment of the uterus because thick adherent part on previous caesarean section scar, this event suggests caesarean section scar ectopic pregnancy.

Then the patient persistently underwent uterine compression by vaginal pack under general anesthesia for half hour duration particularly against bleeding site of the scar with constant observation of vital signs on monitor machine, this maneuver helps to control her vital sign and reduce bleeding quantity along with utilization of tranexamic acid 1gram IV, misoprostol 1000 mg tablets, gelofusine 1000 ml, ringer lactate 2000 ml and normal saline 0.9% 1000 ml.

Also, blood transfusion of four units of packed red blood cell O rhesus negative, three units of packed red blood cell AB rhesus positive and one unit of fresh frozen plasma had received.

After finished the evacuation and curettage, the removed parts of conception send for histopathology and the transabdominal ultrasound repeated show thick part in lower anterior wall of uterus adherent to

previous cesarean section scar area which measure 2.7 cm in diameter and the uterine cavity became empty with invisible obvious free fluid.

Postoperative ceftriaxone 1g IV, metronidazole 500mg IV, LMW heparin 0.3 SC and tramadol 100 mg IM had received and the patient became hemodynamically stabilized and vaginal bleeding reduced at 5:00 AM.

On assessed her vital signs: blood pressure was 116/64mmhg, pulse was 74 bpm and oxygen saturation was 97% and kept under strict observation.

Next day, the patient transferred to antenatal word for methotroxate therapy consideration with subsequent health condition follow up.

On evaluated her investigations the CBC results revealed hemoglobin concentration was 8.77 g/dl, WBC was 10.68 10^3/ml (reference range: 4 - 9 10^3/ml) and platelets was 153.3 10^3/ml (reference range: 150 - 350 10^3/ml), random blood sugar was 334 mg/dl (reference range: below 140 mg/dl), HbA1C was 7.6% (reference range: below 5.7%) and the liver function test, renal function test, clotting factors, coagulation profile and lipid profile were docu-

mented within normal range results.

Also, an endocrine consultation asked for adjustment the dose of insulin therapy and diabetic control opinion.

On 7th September, the patient was clinically stable with scanty vaginal bleeding, her Beta HCG was 4529 mIU/ml and CBC revealed hemoglobin concentration was 9.08 g/dl, platelets was 108.2 10^3/ml and WBC was 6.52 10^3/ml.

On 8th September, at 10:30 AM patient had performed pelvic MRI which results reported diffuse endometrium wall thickness, myomtrium associated with suspension, small sac with no clear margin on scar and

ectopic pregnancy within scar measured 5.8 x 4.4 x 5.6 cm, this picture confirm cesarean section scar ectopic pregnancy). (Figure 1)

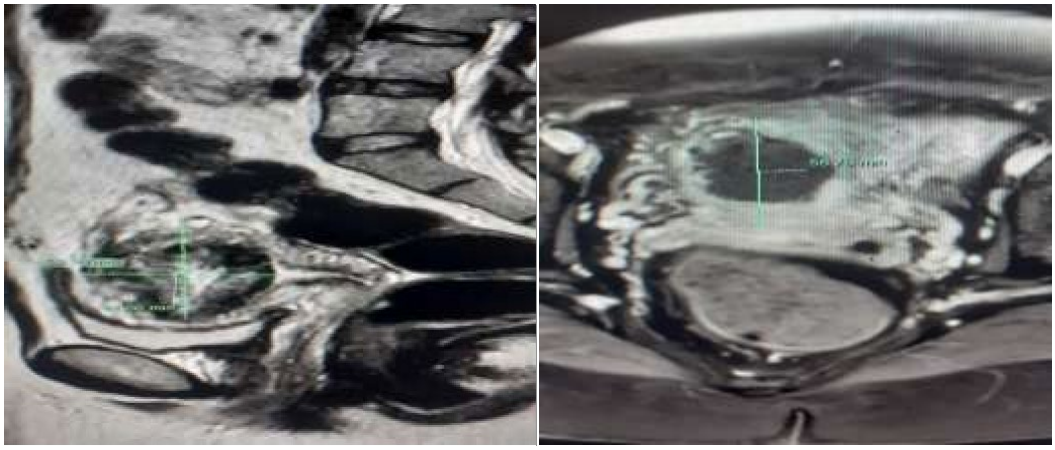

Figure 1: Transverse and longitudinal sections for pelvic MRI of caesarean section scar ectopic pregnancy, Tripoli, Libya, 2022.

On 9th September, the patient had initiated receiving the methotroxate therapy and her dose calculated according to methotroxate dose international equation (her height was 150 cm, weight was 75 Kg, body surface area was 1.702 m2 revealed result 85.1 mg of methotroxate IM) [14].

Additionally, folinic acid 15 mg IM undertaken along with methotroxate therapy. On 13th September, the patient steadily clinically stable her Beta HCG was 2215 mIU/ml with scanty vaginal bleeding but her liver function test slightly became abnormally elevated.

On 19th September, her Beta HCG was 712.5 mIU/ml and the patient planned for discharge and return to obstetrics and gynecology outpatient department at 21th September for clinical reassessment and Beta HCG titer evaluation.

On return at 21th September, her Beta HCG result was 402.38 mIU/ml and scanty intermittent vaginal bleeding remains.

Next follow up on 28th September at outpatient department of obstetrics and gynecology, her Beta HCG was 34.34 mIU/ml, fasting blood sugar was 106 mg/dl (reference range: 70 - 100 mg/dl), CBC revealed hemoglobin was 8.9 g/dl, platelets was 37510^3/ml, WBC was 5.7 10^3/ml with remainder scanty intermittent vaginal bleeding and asked to take oral iron supplementation once daily for one-month duration.

On 10th October, the subsequent follow up demonstrated her Beta HCG was 1.85 mIU/ml, FBS was 98 mg/dl, HbA1C was 5.9% CBC results showed hemoglobin was 10.2 g/dl, platelet was 417 103/ml and WBC was 8.1 10^3/ml and her liver function test became normalized.

On perform post evaluation pelvic MRI for caesarean section scar ectopic pregnancy show significant sac regression with good therapeutic response; the sac measurement was 2.4 x 2.7 x 0.8 cm with remainder scanty intermittent vaginal bleeding. (Figure 2)

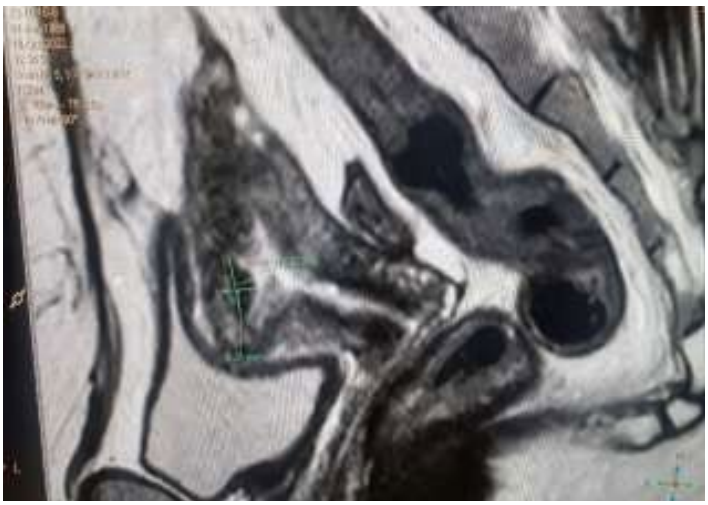

Figure 2: Illustration of magnetic resonance imaging post evaluation of caesarean section scar ectopic pregnancy, Tripoli, Libya, 2022.

Finally, on 17th October her last Beta HCG result was 0.56 mIU/ml, FBS was 10^3 mg/dl and the CBC results revealed hemoglobin was 11.5 g/dl, platelets was 424 10^3/ml and WBC was 11.8 10^3/ml.

The trans abdominal ultrasound carried out showed normal sized uterus with empty cavity and absent endometrial thickness.

And the patient stated that the vaginal bleeding had stopped for three days back and just pinky whitish vaginal discharge remainder intermittently with decline any other obvious clinical symptoms.

Also, on assess her clinical situation patient display significant clinical health improvement without obvious health problems.

And the patient counseled about risks and benefits regarding subsequent desired pregnancy and the importance of preconceptionally planning and future contraceptive issues to prevent recurrence of this events or occurrence of possible adverse pregnancy complications.

Comments

The cesarean scar ectopic pregnancy is considered as a rare type of ectopic pregnancy with difficult diagnosis and individual management according to health situation at presentation.

Therefore, early recognition and proper assessment of CSEP is critical to achieve adequate management and to reduce related maternal morbidity and mortality.

List of abbreviations

Beta HCG = Beta human chorionic gonadotropin CBC = Complete blood count
CSEP = Caesarean section scar ectopic pregnancy FBS = Fasting blood sugar
HbA1C = Hemoglobin A1C IM = Intramuscular
IV = Intravenous
LMW heparin = Low molecular weight heparin MRI = Magnetic resonance imaging
RBS = Random blood sugar SC = Subcutaneous
WBC = White blood cell

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