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Cesarean scar ectopic pregnancy- surgical treatment

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Ektopična trudnoća na ožiljku od prethodnog carskog reza- hirurški tretman

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Abstrakt

Ektopična trudnoća na ožiljku od prethodnog carskog reza je jedna od najređih formi ektopičnih trudnoća. Javlja se , aproksimativno, 1 na 2000 trudnoća. Postoji mnogo izazova u njenoj dijagnostici i zbrinjavanju, koji neprepoznati mogu ugroziti život pacijentkinje, dovesti do lošeg ishoda i značajnog maternalnog morbiditeta i mortaliteta. U trudnoći na ožiljku od prethodnog carskog reza embrion se implantira na ožiljnom tkivu i raste u uterusnom zidu i može dovesti do po život ugrožavajućeg krvarenja, vodeći ka histerektomiji i potencijalno devastirajućim posledicama. Autori prezentuju slučaj ektopične trudnoće na ožiljku od prethodnog carskog reza kod 35-godišnje pacijentkije, koja u anamnezi ima jedan carski rez, i koja je uspešno terminisana ultrazvučno vođenom sukcionom kiretažom.

Ključne reči: ektopična trudnoća, ožiljak od carskog reza, sukciona kiretaža

Abstract

Cesarean scar ectopic pregnancy is one of the rarest form of ectopic pregnancy. It occurs in approximately 1 out of 2000 pregnancies. There are many challengies in its diagnose and management which if not recognised can endangered the patient and provide poor outcome, with a high rate of maternal morbidity or mortality. In cesarean scar ectopic pregnancies an embryo attaches to the scar tissue from previous cesarean section and grows in uterine wall that is not strong, so it may cause life threatening hemorrhage, leading to a hysterectomy and potential devastating consequences.
This is a case report of a 35-year-old pregnant woman, with cesarean scar ectopic pregnancy, who has one cesarean section in her medical history and she was treated by ultrasound-guided suction curettage.

Key words: ectopic pregnancy, cesarean scar, suction curettage

Introduction

The ectopic pregnancy is increased with the increase of the incidence of cesarean section, which also results in higher rate of cesarean scar ectopic pregnancies. It is the rearest form of ectopic pregnancy. It occurs in approximately 1 out of 2000 pregnancies (1). The cesarean scar ectopic pregnancies can be presented in two forms: endogenous where the gestational sac enlargement does not show tendence to devastate uterine wall , and may reach the viable gestation, and the other, exogenous, which grows through the myometrial defect toward the bladder and have high risc for uterine rupture and intra-abdominal hemorrhage (2). In cesarean scar ectopic pregnancies an embryo attaches to the scar tissue from previous cesarean section and grows in uterine wall that is not strong, so it may cause life threatening hemorrhage, leading to a hysterectomy and potential devastating consequences.
In this report, the authors present surgical treatment of cesarean scar ectopic pregnancy using ultrasound-guided suction curretage.

Case report

Our patient is a 35-year-old woman, who came to our clinic with susspected ectopic pregnancy with painless vaginal bleeding. Cesarean section was performed in previous birth, 7 years ago. We perform a physical examination: her vital signs were stabile. A pelvic examination showed slight vaginal bleeding, with closed cervix. There was no pain in the uterus, and no enlargement. Adnexal masses weren't present. The rectouterine pouch (cul-de-sac) was empty. Prust sighn was negative. Beta human chorionic gonadotropin (beta HCG) was positive 3650 mIU/ml. Transabdominal and transvaginal ultrasound showed gestational sac with embryo and positive fetal cardiac activity localised in the scar of previous cesarean section (Figure 1). CRL was 3.7 mm. There was also a yolk sac. The uterine cavity was empty, and the cervical canal also. Thin myometrium was visualized , but does not invade the bladder wall (Figure 2). We used diagnostic criteria as described in the Green-top Guideline of Royal College of Obstetrics and Gynecology: Diagnosis and Management of Ectopic Pregnancy GTG 21 (3). Beta HCG was repeated after two days, and it almoust doubled – 7120 mIU/ml. We discussed with the patient her options for treatment after the diagnose was confirmed. She was presented with possibile management including administration of Methotrexate, which can be local and muscular, or surgical tretament using ultrasound-guided suction curretage, a hysteroscopic suction or a laparoscopic resection. She gave her consent to ultrasound-guided suction curretage. She got the explanation of the potential riscs of massive bleeding, possible laparotomy and even hysterectomy. After a preparation, and informed written consent, under ultrasound guidance, we performed complete suction evacuation of conceptus with Suction Cannula 10 (Figure 3). We did not have any complications during this procedure, which was confirmed using post-procedure ultrasound. There was no active bleeding in the uterine or abdominal cavity, or retained products. The uterine wall was intact.

After a full recovery, on the same day, the patient was discharged home. Beta HCG was repeated few more times, until it was negative.

Two weeks from surgery the patient was fine, and the ultrasound examination showed empty uterine cavity with intact uterine wall (Figure 4). Histopathology showed the products of conception.

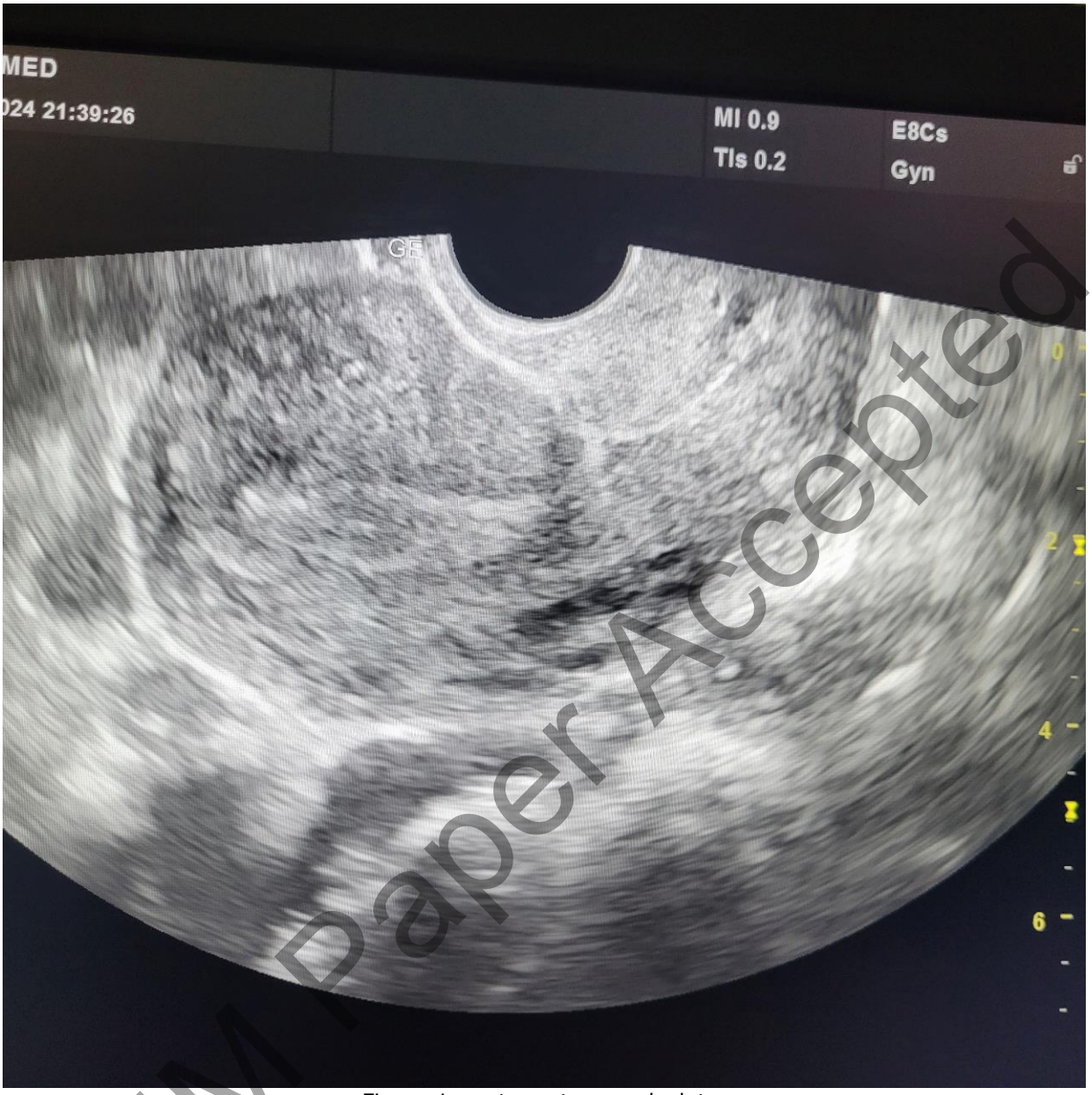

Figure 1. – uterus two weeks later

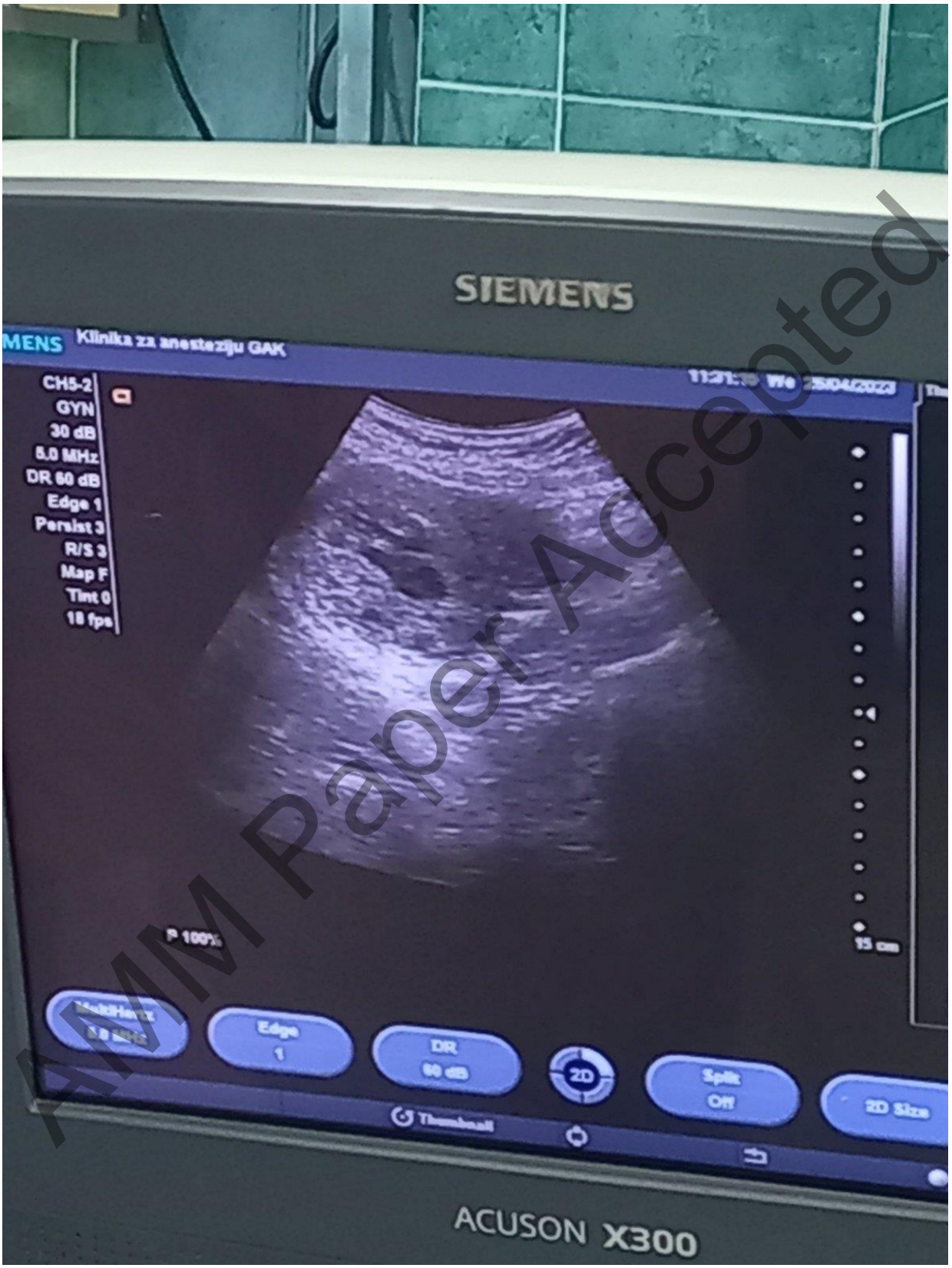

Figure 2. – collapsed gestational sac

Figure 3. – vital pregnancy with intact bladder wall

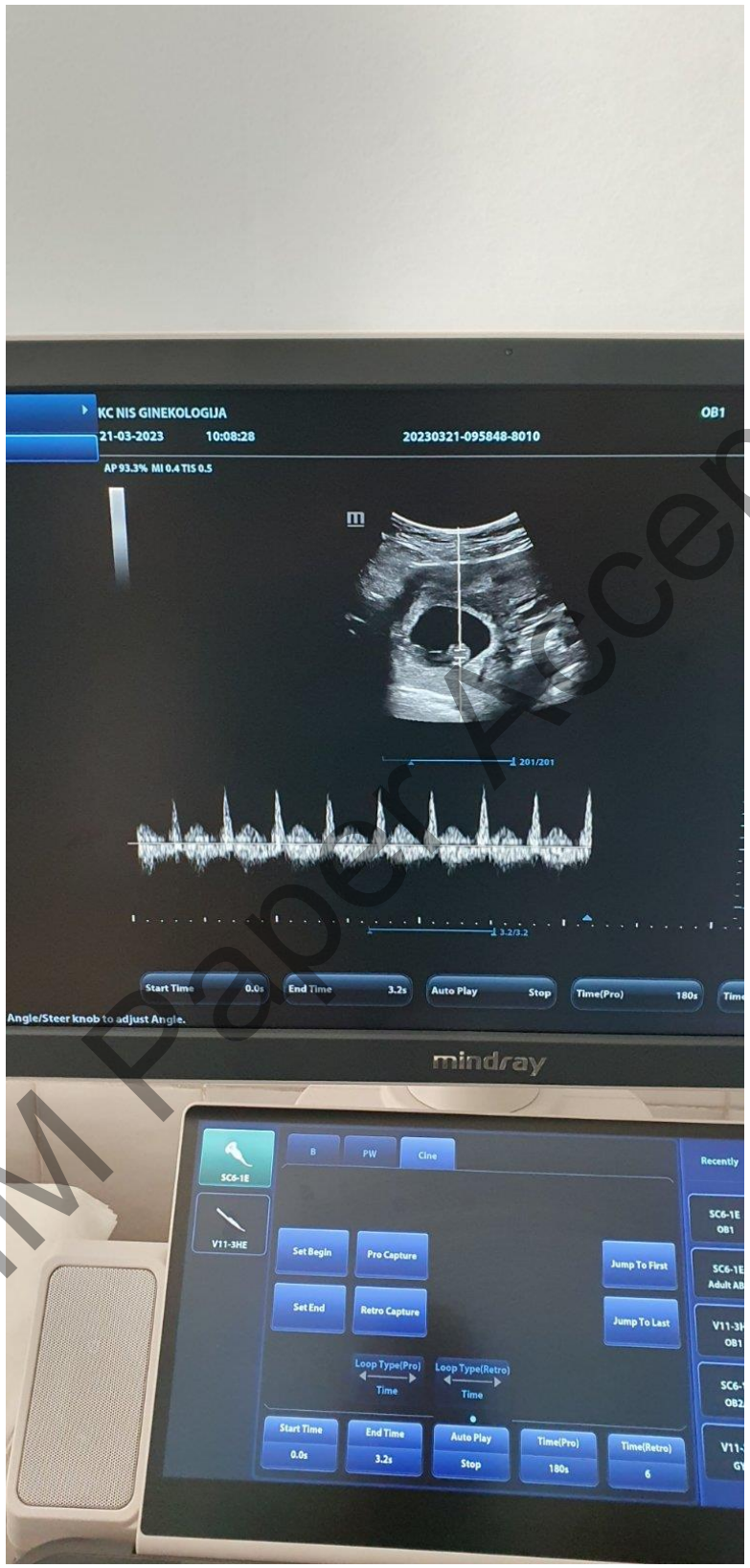

Figure 4. – vital pregnancy localised ob scar of previous SC

Discussion

Cearean scar ectopic pregnancy is one of the types of ectopic pregnancy, where the conceptus implants itself into the scar in the uterus. It is assosiated with high morbidity and mortality within pregnant women, and may cause fatal outcome (4).
The conceptus may imlant itself in the scar tissue in the uterus made by cesarean section, or other uterine surgery, such as myomectomy (5), manual removal of placenta in previous labour (6), or after in vitro fertilisation in absence of uterine surgery history (7). However, this type of pregnancy is always abnormal, conceptus implants itself in the scar tissue, without decidualized endometrium. Symtoms are very scarce and slihgt vaginal bleeding, or abdominal pain may occur (8). There are no pathognomonic symtpoms for cesaren scar ectopic pregnancy (9). The first step to get right diagnosis is use of transvaginal and transabdominal ultrasound. There are several criteria: 1. implantation settled in the scar of the previous cesarean section, 2. visualized functional throphoblastic tissue by ultrasound Color Doppler , 3. impossibility for removing the gestational sac with presure applied by transvaginal probe (10). The best way to manage this rare condition is early termination of pregnancy, which provides lower risc of hysterectomy and preservs the womens fertility.
There are a few ways to manage this condition: medical or surgical. Surgical aproach can be transabdominal or transvaginal (transcervical) (11). We can use transabdominal approach for treatment, which can be laparotomy or laparoscopy according to patients condition (12-15). Transvaginal approach can be suction curettage or hysteroscopic management (16-18). Laparoscopic menagament can be performed itself or combined with transcervical. Medical treatment with Methotrexate can also be performed (19). In order to reduce bleeding during the procedures uterine artery embolisation can be used, or double balloon catheter to tamponade the bleeding.
In this pregnant woman, ovum was imlanted in the scar of previous cesarean section. There was positive fetal heart rate and CRL was about 6 to 7 weeks of gestation. The vascularisation was seen at the implanation site. The uterus was empty and slightly enlarged. Poush of Douglas was empty. Te cervical canal was closed. The present authors have suggested ultrasound-guided suction curettage. The patient gave her consent to suggested method to terminate the pregnancy. The post-procedure ultrasound confirmed no complications, such as uterine and abdominal bleeding, or retained products. The fertility was preserved.

7. Conclusions

There is a higher rate of cesarean sections worldwide. United with increased artifitial fertilisation and other instrumental tretments in uterine cavity contributes to higher incidence of ectopic pregnances. (20). Implantation of the conceptus placed in the cesarean section scar is very rare form of ectopic pregnancies. Early diagnosis is crucial, combined with adequate method of management, becouse of the complications that can jeopardize a patients life, including massive bleeding and ruptured uterine wall. The early termination of pregnancy is suggested once it is diagnosed.
Our case showed that treatment of early cesarean scar ectopic pregnancy, can be successfully performed by using ultrasound-guided suction curretage, which can provide complete and fast evacuation of conceptus (21) and low risk for uterine and abdominal bleeding, transfusion of blood products , with preservation of womens fertility.

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