

# Cesarean Scar on Uterus: Yet Another Site For Ectopic Pregnancy

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## Abstract

Report of a case of post-cesarean early pregnancy with pain abdomen and vaginal bleeding due to pregnancy in uterine scar.

## INTRODUCTION

Despite the consensus that national cesarean-section rates are excessive, they continue to rise. Problems associated with pregnancy in a woman with uterine scar have been reviewed and intensiveness of the care of such pregnancies is emphasized. Most of the problems would be in labor or are encountered at surgical intervention. Reported is the condition that is highlighted less often and is likely to be noted more frequently.

## CASE REPORT

The patient was 22 years old and had cesarean delivery 5 months ago for non-reassuring fetal status in labor. She reported with missed period of 9 weeks following resumed only menstrual cycle in 45 days of cesarean delivery. She was admitted with lower abdominal pain, dull in nature, troubling on and off and associated with frequency of micturition, since a week. She also complained of spotting per vagina of 3 days duration.

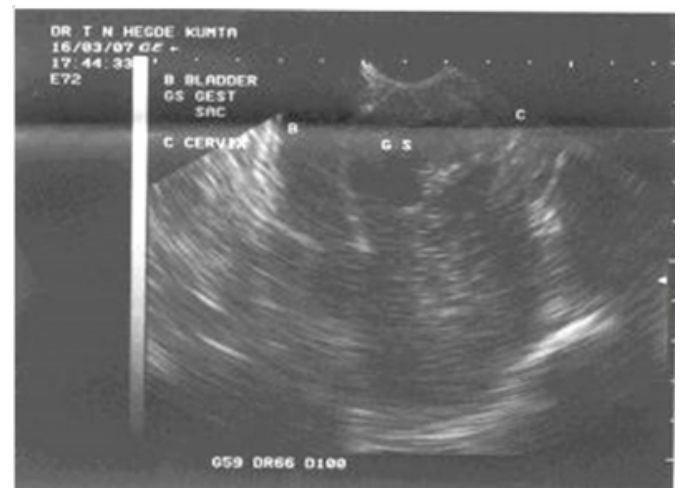
She had mild pallor. There was tenderness in hypogastrium with no guarding or rigidity. There was no dullness in iliac regions and in the abdominal flanks.

On pelvic examination, the exact size of the uterus could not be made out because of tenderness; felt to be of normal parous size. Examination through the anterior fornix was tender and some ill defined irregularity was noted.

Pelvic ultrasonography revealed retroverted uterus 113 x 37 mm with the endometrial thickness of 13 mm and cervix 27 mm long. A complex mass (gestational sac) of 39 x 37 mm in the anterior wall of uterus at isthmus region indenting the bladder was also observed (Fig 1).

## Figure 1

Figure 1: Pelviscan showing gestational sac (GS) in anterior wall of uterus indenting the bladder (B) with no endometrial space occupying lesions and normal cervix (C)

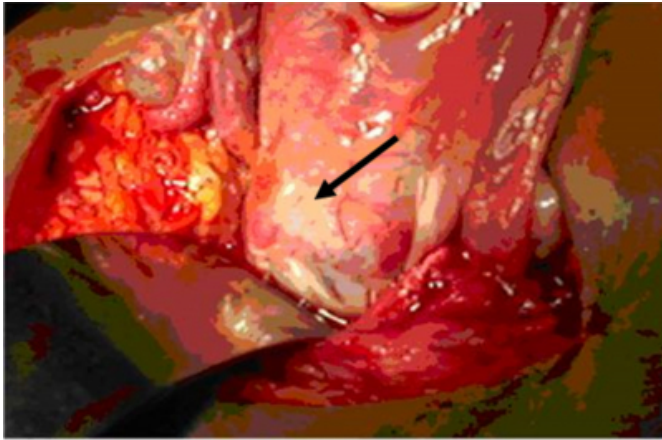


Her hemoglobin estimate was 9.5 g/dL, serum human chorionic gonadotrophin (hCG) record was 36,000 u and she belonged to O positive blood type.

At laparotomy, a defect in the uterovesical fold with protruding mass was seen (Fig 2).

**Figure 2**

Figure 2: Defect in the serosa of uterus with protruding mass (arrow) at laparotomy

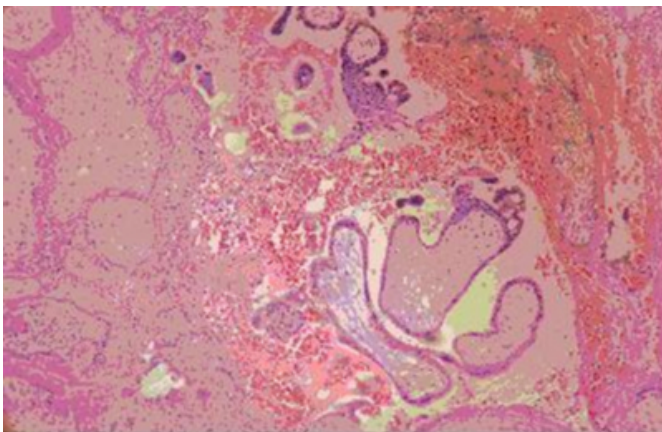


The dissection resulted in bleeding and the mass started exuding. The mass was friable and was removed piecemeal. It was not possible to make out as to whether there was rent into the uterine cavity as the attempt to clear the mass resulted in cutting open the anterior wall of uterus due to the friable nature. Having opened the uterine cavity, it was aspirated. Uterus was closed with #1 vicryl in two layers.

The histopathological examination of the mass showed edematous chorionic villi lined by trophoblasts with fibrin lakes and hemorrhage. The endometrial aspiration curettings showed Arias Stella reaction (Fig 3).

**Figure 3**

Figure 3: Microphotograph showing Arias Stella reaction



## DISCUSSION

The diagnostic possibilities considered in this case were intrauterine pregnancy with abortion through the defective uterine scar, gestational trophoblastic tumor and the possibility of pregnancy in uterine scar. The levels of human chorionic gonadotrophin (hCG) were not consistent with

trophoblastic tumor and it was thought prudent to intervene rather than wait to note the doubling of hCG values, since in any event she would require exploration. Termination of pregnancy by medical means was not considered as the gestational sac was more than 30 mm and the gestation period was of 9 weeks, and the view that failure or progression may result in avoidable intraperitoneal hemorrhage. Laparotomy was preferred over laparoscopy because of the familiarity.

Pelvic ultrasound provides clue to the diagnosis. Godin et al<sup>1</sup> have put forward the sonologic diagnostic criteria for pregnancy in cesarean uterine scar as: no evidence of pregnancy in uterine cavity or within the cervical canal, presence of gestational sac growing and developing in the anterior uterine wall and, defect in the myometrium tissue between the gestational sac and the bladder wall.

The case reported appears to be the one of ectopic pregnancy in cesarean uterine scar in the light of clinical manifestation, findings at laparotomy, ultrasonographic features and histopathological reports. The patient reported with pregnancy very early after the cesarean, had lower abdominal pain with anterior fornicial tenderness, ultrasonography did not show gestational sac in uterine cavity or cervix, at laparotomy there was a defect in sero (and possibly) muscular layer of isthmus, and uterine suction curettings showed Arias Stella reaction.

The Arias Stella reaction is thought to appear when there is disturbance of trophoblastic tissue. The focal clear cell hyperplasia and atypia in endometrial glands is an important sign of the presence of trophoblast in the body and is of special value in the diagnosis of ectopic pregnancy.<sup>2</sup> Charles<sup>3</sup> have reported the presence of these changes in 77.7 per cent of cases with ectopic pregnancy. The effects of early pregnancy on a lower segment cesarean scar with respect to pathological features, clinical manifestations and diagnosis have been reviewed<sup>4</sup>. There have been only anecdotal case reports over the years and thus far 11 cases are documented. The presence of microtubules in the myometrium is thought to allow implantation and the formation of microtubules is associated with uterine curettage, cesarean incisions and adenomyosis.<sup>5</sup>

Whenever the pregnancy occurs in cesarean section scar, the delayed diagnosis may lead to uterine rupture and bleeding which is extremely dangerous. Since cesarean delivery rate is on the increase for various reasons and consequently proportion of women with pregnancy after cesarean would

be more, a keener and more general awareness of possibility of early pregnancy on uterine scar will foster early diagnosis and improve prognosis.

### **CONTRIBUTORS' CONTRIBUTION**

PK case management, data collection, writing and editing

TNH primary case contact

VM literature research, assistance in case management

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