

## An undiagnosed case of cervical ectopic pregnancy: A case report

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### ABSTRACT

Cervical ectopic pregnancy very rarely presents in the second trimester. A 35-year-old female was diagnosed with a rare case of cervical pregnancy intraoperatively at 18 weeks as it was undetected prior. Emergency laparotomy was done as she started bleeding torrentially, and a hysterectomy was done as postpartum hemorrhage was noted. The patient recovered in 1 day and was discharged on day 10 without any postoperative surgical complications.

**Key words:** Ectopic pregnancy, Hemorrhage, Hysterectomy, Shock

In an ectopic pregnancy, the fertilized ovum is implanted at a site other than the normal uterine cavity. Although the majority of ectopic pregnancies are tubal, other rare sites described are the ovary, cervix, and primary abdominal pregnancy. Cervical pregnancy has an incidence of 1:16,000–1:18,000 of all pregnancies [1]. Cervical ectopic pregnancy is a rare condition with an incidence of <0.1% of all ectopic pregnancies. It is associated with high morbidity and mortality. Timely intervention is required to preserve fertility and avoid the need for a hysterectomy [2]. Known risk factors include a history of dilation and curettage preceding 60–70% of cases and advanced reproductive technology [3]. About 91% of women with cervical ectopic pregnancy present with vaginal bleeding that is typically painless, thought to be secondary to relatively decreased pain receptors in the cervix. However, 29% presented with massive hemorrhage [4]. The differential diagnosis typically consists of spontaneous or missed abortion and can sometimes be confused with cervical cancer on physical examination with a markedly vascular, friable, and barrel-shaped cervix with a partially opened external OS [5,6].

A second-trimester ectopic pregnancy is a rare kind of ectopic pregnancy and is associated with high maternal mortality [7]. Here, we discuss a rare case of second-trimester cervical ectopic pregnancy which was undiagnosed and the patient was managed successfully.

### CASE REPORT


A 35-year-old female with an obstetric score of G2P1L1 and a previous history of the lower segment cesarean section, came with complaints of bleeding per vagina. She gave a history of

amenorrhea for 4 months, after which she started having bleeding per vagina. The patient assumed it to be her menstrual cycle and sought hospital care only when the bleeding did not stop for 5 days.

The primary care doctor gave a course of oral antifibrinolytic and oral antibiotics after which, the bleeding stopped for a day. The patient was referred to the first referral unit when she started bleeding again. Her urine pregnancy test turned out to be positive and the ultrasound (USG) was suggestive of single live intrauterine pregnancy of 17 weeks. The patient was told she is pregnant and was sent home with iron and calcium tablets. She started to bleed profusely after 1 week and was referred to secondary health care, where 2 units of blood were transfused. The patient was then referred to the tertiary center for profuse bleeding per vagina. She was admitted to Hassan Institute of Medical Sciences and a basic workup was started along with USG for placental location.

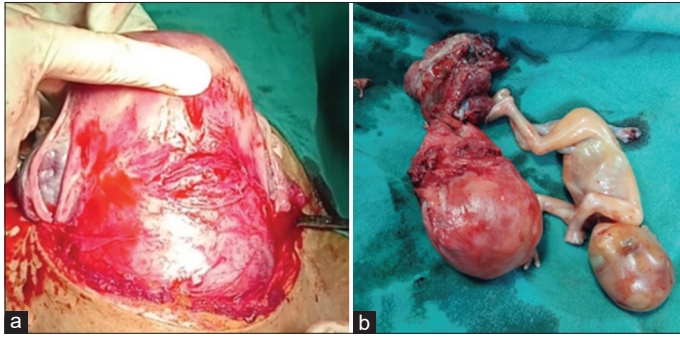
Her vitals were stable, per abdomen examination revealed a relaxed uterus of around 18 weeks size. Local examination showed minimal clots with no active bleeding, per vaginal examination was not done with suspicion of the low-lying placenta as the previous USG report did not mention the placental location. The patient started to bleed torrentially after 2 h of admission and hence USG was deferred, the patient was shifted to the operation theatre with blood.

Emergency laparotomy was done with a probable diagnosis of the low-lying placenta with accreta. On table, vitals started deteriorating. Per abdomen, the uterus was found to be an hourglass contour and the abdomen was opened with pfannenstiel incision. Adhesions were present due to the previous cesarean section. The uterus was found to be a lantern on the dome of St Paul's cathedral appearance which is an empty uterine cavity and distended and/or enlarged cervix (Fig. 1a). A vertical incision was given on the cervix and the fetus was extracted (Fig. 1b). Postpartum

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**Figure 1: (a) Uterus with lantern on dome of St Paul's cathedral appearance, after dissecting through the adhesions of previous LSCS scar; (b) Hysterectomy specimen with 18 weeks fetus. (external OS was open and internal OS snugly closed)**

hemorrhage was noted; hence, the decision for hysterectomy was taken and preceded.

The specimen was sent for histopathological examination (Fig. 2). A urologist was called to check for bladder integrity and the bladder was found to be intact. Two pints of packed red blood cells and two pints of fresh frozen plasma were transfused intra-operatively and the patient was shifted to intensive care unit, the patient recovered and was discharged on day 10 without any postoperative complications.

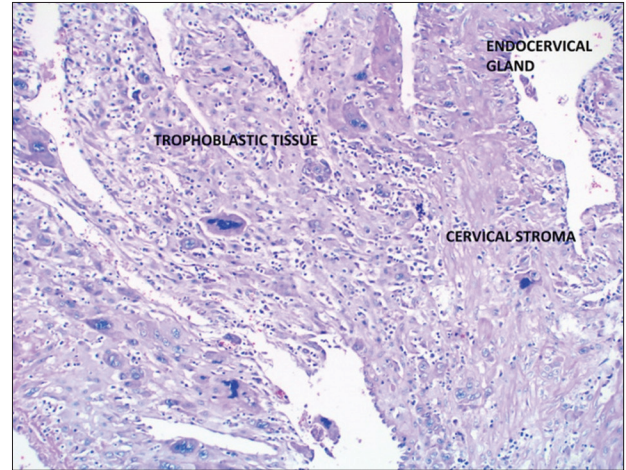
**DISCUSSION**

Cervical ectopic pregnancy is the second rare form of ectopic pregnancy following an abdominal ectopic pregnancy [8]. They presenting in the second trimester, like the case reported here, is even extremely rare. The reported risk factors for cervical pregnancy include a history of pelvic disease, smoking, previous pelvic surgery, previous ectopic pregnancy, intrauterine device use, anatomic anomalies, previous cesarean delivery, previous uterine, or cervical surgery, *in vitro* fertilization, and diethylstilbestrol exposure [8]. Here, the risk factor was a previous cesarean section.

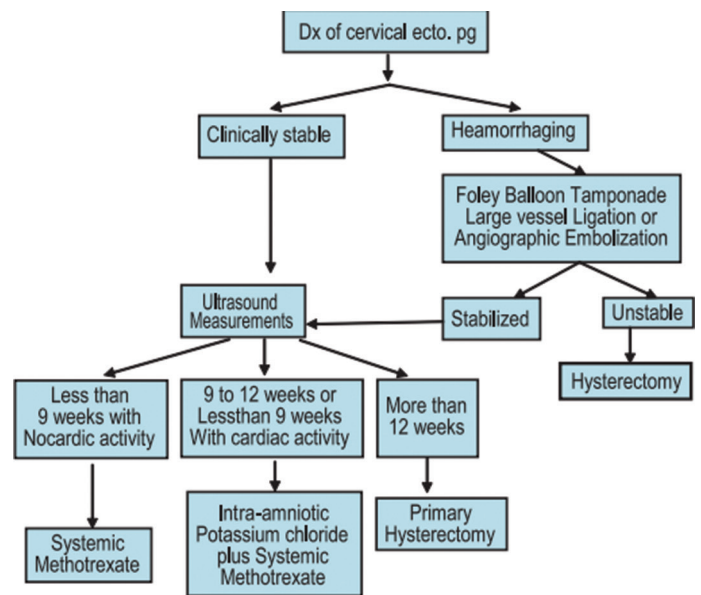
Five clinical signs of cervical ectopic pregnancy include (1) uterine bleeding without cramping pain after a period of amenorrhea, (2) softened and disproportionately enlarged cervix equal to or larger than the corporal portion of the uterus (an hourglass-shaped uterus), (3) products of conception entirely confined within, and firmly attached to the endocervix, (4) a snug internal os, and (5) a partially opened external OS [8].

The diagnosis of cervical pregnancy is established by transabdominal and/or transvaginal USG. Sonographic diagnostic criteria are empty uterine cavity or thickened endometrium, distended and/or enlarged cervix, gestational sac or placental tissue below the level of the internal OS, negative "sliding organs sign," and high peritrophoblastic vascularity on Doppler examination (peak velocity >20 cm/s, pulsatility index <1.0) [9]. Here, though a scan was done at 17 weeks, cervical pregnancy was not detected.

Cervical pregnancy is traditionally considered a high risk for hemorrhage and has historically been treated with a hysterectomy, leading to loss of fertility. With improvements in USG, early diagnosis of cervical ectopic pregnancy is possible, allowing for the opportunity to use conservative medical management and



**Figure 2: Microscopy showing trophoblastic tissue attached to cervical tissue**



**Figure 3: Treatment algorithm suggested for cervical ectopic pregnancy [11]**

interventional measures rather than surgical management. The factors that favor conservative medical management are early diagnosis preferably before 12 weeks, low beta-(human chorionic gonadotropin) levels, and the absence of cardiac activity [10]. However, hemodynamically unstable patients or those who fail medical management require a hysterectomy [9]. The treatment algorithm suggested for cervical ectopic pregnancy is shown in Fig. 3 [11].

**CONCLUSION**

This is a case of cervical ectopic pregnancy which was undiagnosed till the 18<sup>th</sup> week and the patient had to undergo a hysterectomy in order to save a life. Hence, an early diagnosis of ectopic pregnancy can be managed medically and the patient's fertility can be preserved. Therefore, clinicians and radiologists should maintain a high index of suspicion in cases associated with risk factors.

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