

Transabdominal cerclage in the management of cervical pregnancy: three case reports

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Abstract. We report three cases of cervical pregnancy, managed by transabdominal uterine cerclage and cervical curettage: each one was followed by a successful pregnancy. A review of the literature is presented.

Key words: Cervical pregnancy – Ectopic pregnancy – Transabdominal cervical cerclage

Introduction

Cervical pregnancy is defined as the implantation of a fertilized ovum in the cervical canal. It is a rare entity representing less than 0.15% of all ectopic pregnancies (Breen 1970; Bayati 1989). Like any other ectopic pregnancy, cervical pregnancy is a gynecological emergency, associated with life-threatening hemorrhage, often necessitating blood transfusions and even hysterectomy (Ratten 1983). Although in the recent years effective conservative procedures (surgical and non-surgical) have prompted a remarkable improvement in the treatment of cervical pregnancy, the prognosis for future fertility still remains dismal (Bachus 1989). We report three cases of cervical pregnancy, in which surgical management with transabdominal cervical cerclage allowed for normal future fertility. Different options for conservative management of cervical pregnancy and subsequent reproductive performance are discussed.

Case reports

Case 1

A.A., a 26-year-old nulliparous white woman was admitted complaining of vaginal bleeding and cramping pain of one day's duration. On admission the patient gave a history of 9 weeks' ame-

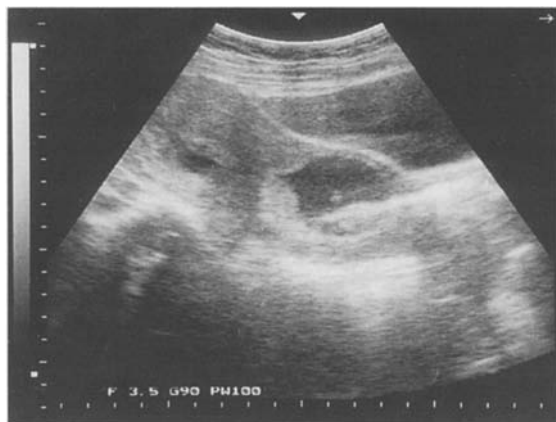


Fig. 1. Ultrasonogram of cervical pregnancy with placenta attached to the posterior wall and an 11 weeks viable fetus

norrhoea and then heavy painless vaginal bleeding (blood pressure 110/80, pulse 90). Pelvic examination revealed normal external female genitalia, blood clots in the vagina and a soft swelling 4–5 cm in diameter in the posterior fornix. The cervix was enlarged, the external os slightly open. The uterus was enlarged and mildly tender. An ultrasound scan showed an empty uterine cavity and a pregnancy (of approximately 8 weeks' gestational age) implanted on the posterior wall of the cervix with fetal heart activity. On the left-side of the cervix, there was an echogenic mass 6 cm in diameter which could be seen. A clinical diagnosis of cervical pregnancy with parametrial hematoma was made and a laparotomy was done. After the incision of the vesico-uterine peritoneum, the cervix was exposed. The cervical cavity was curetted transvaginally. The broad ligament was opened and hematoma was evacuated after which a laceration of the cervix was sutured. As bleeding did not stop, cervical cerclage, including cervical branches of the uterine arteries, was performed using no. 3 chromic cat-gut on a large atraumatic needle. Once a complete control of cervical bleeding had been achieved the abdominal wound was closed in layers. The patient did not require blood transfusion. The postoperative course was uneventful. Fifteen months later the patient became pregnant. A prophylactic cerclage was done, and she delivered spontaneously a live boy (4350 g) at 37 weeks gestation, without any complications.

Case 2

C.I., a 31-year-old white woman was admitted to hospital with heavy painless vaginal bleeding following 9 weeks' amenorrhoea. The patient had one year previously had a spontaneous abortion, followed by curettage. On admission the patient was pale, with a blood pressure of 110/80, pulse rate 90 and hemoglobin level of 11 g/dl. Pelvic examination revealed vaginal bleeding with an enlarged cervix and the external os was slightly open. The uterus was enlarged and tender. An ultrasound scan showed an empty uterine cavity and a pregnancy (of approximately 8 weeks' gestational age), implanted on the anterior wall of the cervix with fetal heart activity. A diagnosis of cervical pregnancy was made and a laparotomy was done. After the incision of the vesico-uterine fold of peritoneum, the cervix was exposed. The cervical cavity was curetted transvaginally. Because the bleeding from the cervix did not stop a cervical cerclage was made with no. 3 chromic cat-gut. Once after achieving hemostasis the abdominal wound was closed in layers. Two units of blood were transfused. Two months later a hysteroscopy showed a normal cervical canal. Six months later the patient became pregnant. She had a prophylactic cerclage and was delivered of a live girl (3300 g) at 39 weeks gestation without any complication.

Case 3

D.C.L., a thirty year-old, para 1-0-0-1, who had had a previous cesarean section, was admitted to hospital with a recent sonographic diagnosis of cervical pregnancy. The patient had had twelve weeks of amenhorrea and referred heavy bleeding one month previously.

Pelvic examination revealed an enlarged uterus, with a small cervix, displaced to the right by a 5 cm mass. Ultrasound showed a cervical pregnancy implanted on posterior wall of the cervix, with a viable embryo, corresponding to 11 weeks' gestation (Fig. 1). A laparotomy was done as described in Case 2. There was no need for blood transfusion and the postoperative course was uneventful.

Hysteroscopy, performed two months after, revealed a normal cavity and the patient now has a normal ongoing pregnancy.

Discussion

Since 1911, more than 300 cases of cervical pregnancies have been reported. The quoted incidence of cervical pregnancy ranges from 1:1,000 live-born to 1:18,000 (Dees 1966).

The most common complication of cervical pregnancy is hemorrhage, often necessitating blood transfusion and even hysterectomy.

Pathologic criteria for the diagnosis of cervical pregnancy have been clearly announced by Rubin in 1911 while clinical and sonographic criteria have been proposed by Paalman (Paalman 1959) and Baader-Armstrong (1990).

Improvement in diagnosis and early treatment has allowed a sharp and clear decrease in maternal mortality, although the incidence of hysterectomy for cervical pregnancy has been given as 50% (Yankowitz 1990). The emphasis of recent on this subject seems to have concentrated on conservative management with preservation of fertility.

In absence of profuse bleeding, non-surgical treatment, based on methotrexate administration systemically or intraamniotically has been recommended with excellent results (Oyer 1988, Sovall 1988, Marcovici 1994).

When bleeding is present, a number of surgical options have been suggested (Yankowitz 1990) and include curettage and tamponade, amputation of the cervix, cervical cerclage with or without an intracervical obturator, transabdominal or transvaginal cervical evacuation, Foley catheter placement into the cervical canal (Nolan 1989), ligation of the descending branches of the uterine artery, bilateral ligation of the internal iliac artery (Nelson 1979) and angiographic embolization of the uterine artery (Lobel 1990).

We believe that transabdominal uterine cerclage can be effective in the management of cervical pregnancy, achieving an excellent control of bleeding without any damage to the uterus anatomy. A laparotomy also allows repair of a cervical laceration or evacuation of hematoma.

Only a few successful subsequent pregnancies have been reported (Bachus 1989).

Cervical incompetence should not occur since the internal os should not be affected. Thus prophylactic cervical cerclage in successive pregnancies may not be necessary. Hysteroscopic examination two or three months after treatment could be useful in providing information about the internal cervical os.

In our hands laparotomy with ligation of the descending branches of the uterine arteries has been successful and seems to preserve reproductive function in patients who might otherwise have had a hysterectomy.

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