Ectopic gestation in the cervix is an obstetric rarity. When it occurs, its tendency to generate uncontrollable hemorrhage is well documented. The resulting hemorrhage is usually so severe that until recently, the only effective treatment modality was emergency hysterectomy. In recent years, however, many authors have recorded success with conservative measures resulting in the preservation of the affected uterus, and in one case, a successful live birth with the same pregnancy. These conservative management options rely on early accurate diagnostic criteria. We recently encountered an ectopic cervical pregnancy which presented in such an atypical fashion that diagnosis was only made at surgery, during which the sudden severe hemorrhage could only be controlled by emergency hysterectomy.

**Case Report**

A 35-year-old Saudi woman, Para 1+0 (normal term delivery 18 years before presentation), was initially admitted at a peripheral hospital with profuse vaginal bleeding, following seven weeks' amenorrhea. She was resuscitated from hypovolemic shock and referred to King Fahd Central Hospital, Gizan. She had a significant history of laparotomy with myomectomy one year after childbirth, followed by two diagnostic curettages for secondary infertility investigation. She was admitted in a stable condition, but with severe anemia. Abdominal and pelvic examination revealed a subumbilical midline scar, and an 18 weeks' gestational-sized irregular firm uterus with a multiparous cervical os, through which protruded a soft fleshy tissue which bled minimally on contact.

A clinical diagnosis of a bleeding polyp complicating an uterine fibroid was made. Her blood investigations (complete blood count, coagulation profiles, electrolytes and urea, and liver function tests) were normal, except a low hemoglobin count of 7.5 g/dL. The patient's pregnancy test was positive, and ultrasonic scan confirmed the presence of uterine fibroids, as well as a viable intrauterine seven weeks' gestation. She was managed conservatively with bed rest, supportive treatment, and 500 mL whole blood transfusion to correct anemia. The vaginal bleeding subsided after three days of hospital confinement.

After two weeks of hospital rest, a repeat abdominal and vaginal ultrasound showed a non-viable gestation in the lower uterine cavity, with some blood streaks in the upper uterine cavity. A repeat pregnancy test was negative. After the necessary preparation, the patient was taken to the theater for examination under anesthesia. Following evacuation of the uterine contents, multiple fibroids with fetal material were found within the cervical canal. The cervical pregnancy was complicated by extensive erosion of the posterior wall of the cervical canal by chorionic tissue. The dilated and globular cervical canal was full of fetal material. As this was evacuated, there was severe hemorrhage which failed to respond to oxytocics and the application of pressure packs. Bilateral stay sutures at positions three and nine o'clock were applied in an attempt to ligate the cervical branches of the uterine vessels. This arrested the bleeding for only about five minutes, and an immediate laparotomy had to be performed. The uterine fibroid with multiple visceral adhesions was confirmed. The cervix was hypertrophied, globular and friable, with extensive vascularity in the lower uterine pole. An immediate total abdominal hysterectomy, with removal of what looked to be a diseased left ovary, was performed. During the operation, the patient had a total of 1500 mL of whole blood transfusion. After the operation she had anemia (hemoglobin 8.3 g/dL), which was corrected by a further transfusion of 500 mL of packed red blood cells. She went home on the seventh postoperative day with a hemoglobin count of 10.5 g/dL.

Histopathology of the specimens confirmed cervical implantation of the placenta, uterine leiomyomata with blood clots in the uterine cavity, and a left ovary with multiple follicular cysts.
Discussion

Cervical pregnancy is a rare occurrence, and the cause in any particular patient is uncertain. In this particular patient, one probable contributing factor was the presence of a large uterine fibroid with distortion and partial obliteration of the uterine cavity, restricting implantation. A second contributing factor may have been a possible deficiency of the endometrium following repeated curettage, thereby reducing the chances of intrauterine implantation. With subsequent implantation and fetal growth, the restricted space within the cervical canal, with limited capacity for expansion, resulted in early missed abortion. The failure, both clinical and by ultrasonic scan, to achieve an accurate diagnosis, could be attributed to the presence of large uterine fibroids, with consequent distortion of both pelvic and uterine anatomy. Other difficulties were presented by the pre-existing uterine pathology and the rarity of this condition.

Several conservative therapeutic strategies have been described with successful outcomes. The most favored is the use of methotrexate, either alone or in combination with leucovorin by the systemic route.

Another method is transvaginal local injections of methotrexate amniotically, or transvaginal methotrexate injections systemically, with prior potassium chloride injections into the amniotic sac to terminate fetal activity. Crenin and Feldstein reported successful conservative management with selective right hypogastric and left uterine artery angiographic embolization, followed by suction evacuation. Subsequent successful pregnancies have been documented following transabdominal lower uterine cerclage and cervical curettage. The successful use of stay sutures at the three and nine o'clock cervical positions with minimal postoperative bleeding reported by Kligman et al. failed in this patient, perhaps because of the complicating large fibroids. Local injections of prostaglandins and vasopressins or the successful tamponing technique described by Van de Meerssche et al. are all desperate methods used, sometimes with successful outcomes, to control hemorrhage. When all these conservative measures fail, the ultimate treatment which must be considered promptly to prevent maternal mortality is an emergency hysterectomy.

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