

## Cervical Pregnancy: Dilatation and Curettage and Successful Control of Severe Haemorrhage with Foley catheter.

Justus N. Eze

St. Mary's Hospital, 10 John Nwodo Close, GRA, Enugu, Nigeria.

### Abstract

Cervical pregnancy is a rare form of ectopic pregnancy in which the fertilized ovum implants in the endocervical canal. Its clinical presentation mimics threatened abortion.

We report a case of cervical pregnancy in a grandmultiparous woman still desirous of more children, which was initially wrongly diagnosed, but which diagnosis was confirmed at dilatation and curettage. The torrential haemorrhage that ensued was eventually arrested with Foley's catheter, thus preserving the uterus. Haemorrhagic shock was prevented using plasma expanders, as the patient had refused to consent to blood transfusion. Other methods used in the management of cervical pregnancy are acknowledged.

Sonographers are encouraged to acquaint themselves with the ultrasound features of cervical pregnancy as a way of curtailing the error in diagnosis, while physicians are advised to learn this conservative surgical skill which has been found very handy during emergency, and especially in our environment.

**Keys Words:** Cervical pregnancy, Dilatation and Curettage, Severe Haemorrhage, Foley's catheter.

### Introduction

Cervical pregnancy is the implantation of a pregnancy in the endocervical canal<sup>1</sup>. It is a rare form of ectopic pregnancy<sup>2,5</sup>. Its true incidence is difficult to determine, though published studies variously estimate it to be 1 in 2,400 to 1 in 18,000 pregnancies/deliveries or about 0.1% of all ectopic pregnancies<sup>4,5</sup>. No wonder, the literature on this rare gynaecological condition consists mainly of case reports<sup>7</sup>.

Cervical pregnancy is peculiar because of its tendency to be associated with life threatening haemorrhage<sup>1,2,4,6,7</sup>.

The management of cervical pregnancy differs for different authors and is determined by the clinical presentation, experience of the physician and the facilities available in the unit. This is the report of a case of cervical pregnancy that was initially diagnosed as incomplete abortion, in a grandmultiparous patient. She had profuse bleeding during surgical evacuation of retained products of conception done for the incomplete abortion, but the haemorrhage was successfully arrested by a conservative surgical method and her fertility preserved.

The need for meticulous ultrasound scanning and reporting in our environment is emphasized. Physicians are encouraged to acquire this life- and fertility-saving management skill for the rare, but life-threatening gynaecological condition called cervical pregnancy.

### Case

Our patient was a 36 years old grandmultiparous staff nurse who neither drank alcohol nor smoked cigarettes. Her first pregnancy in 1991 was delivered by caesarean section for breech presentation. She subsequently had four pregnancies that ended in vaginal deliveries. Her last confinement was in 2002. All her babies were alive, though one of the two boys had skeletal abnormalities.

Hence our patient still desired more male children and therefore more pregnancies.

She was first seen on 1/7/2004 with a complaint of intermittent bright red vaginal bleeding and discharge that had been on and off for two months. The bleeding was not associated with abdominal pain or passage of clots. Her last menstrual period was on 15/3/04 and pregnancy had been diagnosed at about six weeks by a positive presumptive pregnancy test. Because of the vaginal bleeding she had subjected herself to bed-rest at home, with occasional sedation with diazepam. She decided to see the doctor when the last bleeding episode did not stop after five days.

On clinical examination, she was stable and her uterus was the size of a 12-week gestation. There was no abdominal tenderness. On gentle speculum vaginal examination, the cervix appeared large and bluish and the cervical os was closed, with bright red blood trickling out of it. A diagnosis of threatened abortion was entertained and she was admitted for management. Her haemoglobin concentration was 10.6gm/dl. Ultrasound scan reported the presence of a gestation sac without viable fetal poles, in the lower part of the uterus and suggested a diagnosis of incomplete abortion. She was counseled for and consented to Uterine Evacuation, but refused to consent to blood transfusion. An intravenous line was set up and prophylactic antibiotics given. She was wheeled to the theatre for surgical evacuation of the uterus.

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**Correspondence:** Dr. Justus N. Eze, St. Mary's Hospital, 10 John Nwodo Close GRA, Enugu, Enugu State, Nigeria.  
**E-mail:** jneze@yahoo.com

During the procedure, the attending physician noted that the uterine cavity was essentially empty, that the products of conception were located in the endocervical canal and unduly attached to it. He needed force to detach the products and their detachment provoked torrential bleeding. He immediately invited the gynaecologist who arrived promptly. With preparations for emergency laparotomy in progress, he proceeded to complete the endocervical evacuation. The bleeding was profuse. A 22 gauge Foley's catheter with 50ml capacity balloon was inserted with its tip in the uterine cavity and the balloon in the endocervical canal. The balloon was gradually distended with sterile water. After instillation of some 45ml, the bleeding stopped. The vagina was cleaned out and packed with dry sterile gauze. Urethral catheter was left in-situ for continuous bladder drainage. The estimated blood loss was 2000ml. Haemorrhagic shock was averted with plasma expanders. The patient was transferred to the recovery room where she was nursed, close to the theatre. Her vital signs remained within normal and the urine output was good.

After 24 hours, the gauze packing was removed and the vagina inspected. There was no bleeding. The pressure of the balloon was then gradually reduced by withdrawing 5ml of the sterile water every 30 minutes, each time inspecting the cervix for bleeding. When the catheter finally came off there was no evidence of bleeding. The urethral catheter was also removed and she was returned to the ward. Her subsequent recovery was uneventful. Her haemoglobin on the second postoperative day was 6.3g/dl. She was counseled for contraception and the importance of early presentation in a future pregnancy, and discharged on haematinics. At follow-up 6 weeks later, she did not have any complaints and had seen her menses. There was no abnormality on general and pelvic examination. Her haemoglobin concentration was 9.2g/dl. She was reassured and encouraged to continue on haematinics and contraception.

### Discussion

Cervical pregnancy is a most unusual manifestation of ectopic pregnancy and a dangerous one<sup>4</sup>. Scarring from a previous caesarean section as in our patient, endometrial curettage and endometritis play a role in the development of this rare condition by enhancing the passage of the fertilized ovum and/or delaying implantation<sup>4</sup>. Nidation and development of the fertilized ovum occurs within the structure of the cervix, the uterine corpus remaining uninvolved<sup>8</sup>.

Cervical pregnancy tends to mimic threatened abortion early in its course<sup>4</sup>. There is amenorrhoea with positive pregnancy test and some vaginal bleeding unassociated with cramping pains. The cervix is discoloured and

enlarged, the external os could be open or closed and the uterus may be palpated as a separate mass from and above the cervical mass<sup>4</sup>. In addition, our patient was bleeding through the cervical os at speculum examination. Incomplete and inevitable abortion is usually the presumptive diagnosis<sup>4</sup>.

In cervical pregnancy, ultrasound scan reveals an empty uterus, with the gestation sac seen in the cervix, thus giving an hour glass appearance<sup>1,5,9,10</sup>. However, our sonographer was unable to give a concise description of the ultrasound findings, probably because he had never seen a case of cervical pregnancy and did not anticipate one. Such a description may have alerted the clinician to the possibility of cervical pregnancy, and should be preferred to mere suggestion of a diagnosis with minimal description of findings, which may be misleading.

Incomplete abortion, as reported by the sonographer, necessitated the uterine evacuation embarked on by the physician. Hence there was no preparation for an alternative method of intervention should the need arise. However, cervical pregnancy came to mind when during procedure, the uterine corpus was empty and the placenta was adherent to the endocervix, with its dislodgment provoking torrential, life-threatening bleeding<sup>4,7</sup>. Intermittent bimanual pelvic pressure and endocervical curettage made it possible to complete the evacuation without endangering the patient's life from haemorrhage, while arrangement was being made for hysterectomy. The Foley's catheter was then used to successfully control the endocervical haemorrhage<sup>11</sup>. The distended balloon arrested the bleeding immediately by a tamponade effect<sup>11</sup>. This enhanced clot formation that prevented further bleeding after removal of the catheter<sup>11</sup>. The cervix does not exhibit reflex contractions to the presence of foreign body hence more fluid was needed to distend the balloon in comparison to a previous report that concerned the uterine corpus<sup>11</sup>. The vaginal packing was to ensure the catheter balloon remained in position. The presence of the distended balloon in the pelvis could lead to acute urinary retention hence the urethra was catheterized. While the balloon remained in position, the catheter allowed drainage of endometrial discharge. There are other advantages to the use of Foley's catheter in a procedure of this nature<sup>11</sup>. Other management options for cases of cervical pregnancy include the use of methotrexate, bilateral uterine artery embolization, hysterotomy and roller ball ablation, vasopressin infiltration of the cervix or cerclage above the cervix and suction evacuation with or without cervicovaginal tamponade, and hysterectomy<sup>1-7,9,10,12</sup>. Because cervical pregnancy may re-occur<sup>12</sup>, it is important to counsel the patient on the need for early ultrasound diagnosis of any future pregnancy and confirmation of its location.

Though cervical pregnancy is rare, due to its tendency to be associated with torrential bleeding, it may be a source of embarrassment to the unprepared physician and an avoidable cause of morbidity, including loss of fertility, and mortality. Early presentation to the clinic, good history and thorough clinical examination, and meticulous ultrasound scanning and concise reporting will help reduce morbidity and mortality by encouraging management options that reduce blood loss and conserve fertility. Early presentation leads to early diagnosis. It is necessary for sonographers to be acquainted with the ultrasound findings of cervical pregnancy<sup>1,5,9,10</sup> and maintain a high index of suspicion. The physician not familiar with the management of

cervical pregnancy is encouraged to refer any suspected case to a gynaecologist. Physicians who are used only to management options that lead to loss of fertility are enjoined to embrace options that conserve fertility, especially in our environment where a high premium is placed on childbearing<sup>13</sup>. Lastly, physicians are encouraged to acquaint themselves with the use of Foley's catheter as a method of controlling severe haemorrhage associated with cervical pregnancy. This is necessary because of the occasional, previously undiagnosed case of cervical pregnancy, which diagnosis may be made during evacuation of retained products of conception and which may put the patient's life and fertility, and the physician's practice, in jeopardy.

### References:

1. Leeman LM, Wendland CL. Cervical ectopic pregnancy: Diagnosis with endocervical ultrasound examination and successful treatment with methotrexate. *Arch Fam Med* 2000; 9(1): 72-77.
2. Riethmuller D, Courtois L, Maillet R, Schaal JP. Ectopic pregnancy management: cervical and abdominal pregnancies. *J Gynecol Obstet Biol Reprod* 2003; 32: 101-108.
3. Hidalgo LA, Penafiel J, Chedraui PA. Management of cervical pregnancy: risk factors for failed systemic methotrexate. *J Perinat Med* 2004; 32(2): 184-186.
4. Plauche WC. Rupture of the uterus. In Nicols DH (ed) *Gynecologic and Obstetric Surgery*. St. Louis; Mosby, 1993: Pp 1135-1146.
5. Grudzinskas JG. Miscarriages, ectopic pregnancy and trophoblastic disease. In Edmonds DK (ed) *Dewhurst's Textbook of Obstetrics and Gynaecology for Postgraduates 6<sup>th</sup> Edition*, London; Blackwell Science, 1999: Pp 61-75.
6. Da Costa V, Wynter S, Frederick J, Wynter H, Fletcher H. Cervical pregnancy. Case report and literature review. *West Indian Med J* 2002; 51: 257-259.
7. Habek D, Habek JC, Curzik D. Unrecognized cervical pregnancy treated by suction curettage and cervicovaginal tamponade. *Zentralbl Gynakol* 2002; 124: 184-185.
8. Studdiford WE. Cervical pregnancy: a partial review of literature and a report of two probable cases. *Am J Obstet Gynecol* 1945; 49: 160-162.
9. Hardy TJ. Hysteroscopic resection of a cervical ectopic pregnancy. *J Am Assoc Gynecol Laparosc* 2002; 9: 370-371.
10. Gun M, Mavrogiorgis M. Cervical ectopic pregnancy: a case report and literature review. *Ultrasound Obstet Gynecol* 2002; 19(30): 297-301.
11. Eze JN, Iloabachie G C, Onah H E. The Use of Foley Catheter in Controlling Severe Uterine Haemorrhage in Gynaecological Practice. *Trop J Obstet Gynaecol* 2002; 19: 44-46.
12. Radpour CJ, Keenan JA. Consecutive cervical pregnancies. *Fertil Steril* 2004; 81: 210-213.
13. Okonofua F. Infertility and Women's Health in Africa. Editorial. *Afr J Reprod Health* 1999; 1: 1-3.