

## Cervical pregnancy: A rare case report

Beemba Shakya

Paropakar Maternity and Women's Hospital, Thapathali, Kathmandu

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### ABSTRACT

Cervical pregnancy accounts for less than 1% of ectopic pregnancies, with the incidence of 1 in 1,000 to 95,000 pregnancies. Here is a case report of 25 years G2P1 lady who presented with cervical pregnancy at 8 weeks and 5 days period of gestation and underwent manual vacuum aspiration under ultrasound guidance. Improved ultrasound resolution and earlier detection of these pregnancies have led to the development of more conservative treatments that attempt to limit morbidity and preserve fertility.

**Keywords:** cervical pregnancy; manual vacuum aspiration; preserve fertility.

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### INTRODUCTION

Cervical pregnancy is the implantation of blastocyst in the endocervical canal. They account for less than 1% of ectopic pregnancies with the incidence of 1 in 1,000 to 95,000 pregnancies.<sup>1</sup> In the past, hysterectomy was often the only choice available because of associated severe hemorrhage. Improved ultrasound resolution and earlier detection of these pregnancies has led to the development of more conservative treatments that attempt to limit morbidity and preserve fertility.<sup>2</sup>

### CASE

A 35 years old G<sub>2</sub>P<sub>1</sub> lady at 8 weeks and 5 days period of gestation and past cesarean delivery 11 years ago was referred-in with ultrasound diagnosis of cervical pregnancy and one week history of vaginal bleeding on 19<sup>th</sup> August 2019. She was stable; cervix was soft, broadened and closed cervical os with 12 weeks size uterus. Abdominal USG revealed 8 weeks 3 days gestation with cardiac activity and CRL of 18.5mm; and confirmed by TVS and MRI [Figure-1 and 2].



### CORRESPONDENCE

Dr Beemba Shakya

Paropakar Maternity and Women's Hospital, Thapathali, Kathmandu

Email: [bshakya02@gmail.com](mailto:bshakya02@gmail.com); Phone: +977-9840 185953



**Figure-1 & 2: Ultrasound and MRI showing cervical pregnancy**

Pre procedure  $\beta$  hCG was  $>150,000$  mIU/L. Ultrasound guided manual vacuum aspiration (MVA) done with ligation of both descending cervical branch of uterine artery and intra-cervical Vasopressin (20 ml of 20 units diluted in 100 ml normal saline). Post procedure, to control bleeding, intra cervical Foley catheter was placed with its bulb inflated with 30 ml normal saline under USG guided. During the procedure, tranexamic acid 1g intravenous and PGF $2\alpha$  250 mcg intra muscular was given. Blood loss was about 800 ml.

Histopathological report revealed product of conception, consistent with fetal parts. On 3<sup>rd</sup> post-operative day gradual drainage of intra cervical Foley catheter was undertaken in operation theatre (OT), there was no bleeding. On 10<sup>th</sup> POD, USG revealed RPOC of size (55x46) mm. Evacuation was undertaken in OT and intra cervical Foley catheter was placed with its bulb inflated with 30 ml normal saline which was removed on 3<sup>rd</sup> POD. Post procedure was uneventful except for blackish discharge and patient was discharged after 10 days. Post procedure, patient had falling  $\beta$  hCG, her 2 weeks, 3 weeks, 1 month, 1 ½ months and 2 ½ months  $\beta$  hCG was 3181 mIU/ml, 894 mIU/ml, 67 mIU/ml, 9.5 mIU/ml and 1.9 mIU/ml respectively. After 22 days post procedure, patient had menstruation which was prolonged, of 12 days duration. She resumed her normal menstruation 2 months following post evacuation.

## COMMENTS

The aetiology of cervical pregnancy is not fully understood, but reported risk factors for cervical pregnancy include, history of pelvic inflammatory 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.<sup>3</sup> In this case, the patient had the history of previous lower segment cesarean section.

The diagnosis of cervical pregnancy is established by transabdominal and/or transvaginal ultrasound. Sonographic diagnostic criteria are:<sup>4</sup> 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 sign” (when gentle pressure was applied on the cervix with the probe, the gestational sac of an abortus slides against the endocervical canal unlike an implanted cervical pregnancy) and high peritrophoblastic vascularity on Doppler examination (peak velocity  $>20$ cm/s and pulsatility index  $<1$ ). In this case, all these criteria were present in TVS.

In a study by Kirk E et al,<sup>5</sup> for conservative management of cervical pregnancy with serum  $\beta$  hCG  $<10,000$  IU/L, they advocated a single dose of methotrexate (MTX) as first line management for cervical ectopic pregnancies with no visible cardiac activity. For cervical pregnancies with fetal cardiac activity, initial treatment should ideally be local MTX or potassium chloride injection with or without interval curettage. If such techniques are not available then multiple dose systemic MTX is an alternative.

Higher rate of primary MTX failure has been associated with fetal cardiac activity, initial serum  $\beta$  hCG  $>10,000$  IU/L, a gestational age of  $>9$  weeks and a crown-rump length (CRL) of  $>10$ mm.<sup>6</sup> In this case, Methotrexate was not given as CRL was 18.5 mm, fetal cardiac activity was present and pre evacuation  $\beta$  hCG was  $>150,000$  mIU/L.

In a case report by Chang,<sup>7</sup> a 39 year old lady at 6 weeks of gestation presented with vaginal bleeding, TVS revealed cervical pregnancy with  $\beta$  hCG 29,660mIU/mL, underwent suction dilatation and curettage under general anesthesia without massive hemorrhage. The other case reported by Singh,<sup>8</sup> 32 years old G $_2$ P $_1$  at 8 weeks of amenorrhoea with

previous LSCS whose TVS revealed cervical pregnancy of 9 weeks with presence of cardiac activity. Single dose intramuscular MTX 50 mg was administered the next day and MVA was performed on the third day. Cervical tamponade was placed with a Foley catheter with its bulb inflated with 30 mL normal saline. In another case report by Samal et al.,<sup>9</sup> 27 years primi at 8 weeks gestation, TVS confirmed cervical pregnancy with absent cardiac activity. Her  $\beta$  hCG was 1047 mIU/ml. Patient underwent gentle cervical curettage followed by 18 Fr Foley catheter with 40 ml normal saline inflated in the cervical canal to control bleeding by tamponade effect.

In cervical pregnancy, as depicted by Sharma et al.,<sup>10</sup> the arrest of bleeding can be achieved by tamponade of the uterine cervix with a Foley catheter or vaginal packing, ligation of descending branches of the uterine arteries, bilateral hypogastric artery ligation or uterine artery embolization where conservation of uterus is required for future fertility.

Similarly, in this case with 9 weeks of cervical pregnancy with presence of cardiac activity and  $\beta$  hCG > 10,000 mIU/ml (>150,000 mIU/ml), patient underwent MVA with prior descending branch of uterine artery ligation and intracervical vasopressin instillation. Post procedure, to control bleeding, intracervical Foley catheter was placed with its bulb inflated with 30 ml normal saline. Her post procedure period was uneventful and her fertility was preserved.

## CONCLUSIONS

Although cervical pregnancy is very rare, increased number of cases being reported because of risk factors like high cesarean section rate. Cervical pregnancy can be diagnosed at an earlier gestational age by high resolution ultrasound. Early intervention reduces the complication of severe life-threatening hemorrhage necessitating hysterectomy.

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