

# Surgical management of cervical ectopic pregnancy after systemic methotrexate: A case report.

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## BACKGROUND

Cervical ectopic pregnancy is a rare condition with an incidence of less than 1% of all ectopic pregnancies<sup>1</sup>. It is associated with high mortality and morbidity due to life threatening haemorrhage, particularly due to increased vascularity and cervical friability from trophoblastic tissue proliferation<sup>1</sup>.

Management options include medical management and surgical procedures, all with the goal of fertility preservation.

## CASE

A 26-year-old nulliparous female presented to the emergency department of a rural hospital with vaginal bleeding after six weeks of amenorrhoea. She had type 2 diabetes mellitus on liraglutide, with no other medical or surgical history. This was an unplanned pregnancy.

The  $\beta$ -subunit of human chorionic gonadotropin ( $\beta$ hCG) titre was 32924. Based on transvaginal ultrasound (Figure 1), a live endocervical gestation was identified with a crown rump length measuring 9.8mm, equivalent to 6+5 weeks gestation. A diagnosis of a live endocervical ectopic pregnancy was made.



Figure 1. Cervical ectopic pregnancy detected on initial transvaginal ultrasound.

## MANAGEMENT

The patient received systemic multi-dose Methotrexate therapy via Intramuscular injection 50mg/m<sup>2</sup>, for a total of four doses, with ongoing outpatient monitoring.

16 days later, she presented to a different rural emergency department with abdominal pain and bleeding. The  $\beta$ hCG was now 6381 and there was a persistent cervical gestational sac on transvaginal ultrasound. Due to ongoing bleeding requiring blood transfusion, the decision was made to perform a suction D&C under general anaesthesia.

The patient underwent bilateral ligation of the cervicovaginal branches of the uterine arteries, suction evacuation of retained pregnancy products, uterine curettage, and placement of a Foley catheter in the cervix kept in place by a McDonald's cervical cerclage. The uterine arteries were pre-operatively catheterised but embolization was not required. The Foley catheter and cerclage were removed two days later. She required a total of four units of blood during the admission and the  $\beta$ hCG level fell to zero after 45 days. There were no further reported complications.

## DISCUSSION

Historically, cervical ectopic pregnancies often presented with massive haemorrhage and required emergency hysterectomy<sup>1</sup>. However, the use of ultrasound in early pregnancy now results in an earlier diagnosis, allowing for a trial of medical or planned surgical management. This results in significant prevention of life-threatening haemorrhage and potential loss of fertility.

Medical management includes local or systemic methotrexate and/or intra-amniotic KCL. Factors associated with unsuccessful medical management include gestational age  $\geq 9$  weeks,  $\beta$ hCG titre  $\geq 10,000$ , crown-rump length  $> 10$ mm, or cardiac activity<sup>2</sup>.

Fertility-preserving surgical interventions include endocervical curettage, uterine artery branch ligation, intra-cervical Foley balloon tamponade, cervical cerclage, uterine artery catheterisation and/or embolization to prevent significant haemorrhage<sup>2</sup>. This is suitable for women who have persistent bleeding despite medical management or present later in pregnancy.

Little evidence exists to guide clinical management of cervical ectopic pregnancies. Given this, it is crucial to consider patient preference, surgeon skill and available resources when making these management decisions.

## REFERENCES

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2. Handley K, Bergeron L, and Biggio J. Conservative management of a second-trimester cervical ectopic pregnancy. *Ochsner Journal* (2020), 20(4) 459-462; doi: <https://doi.org/10.31486/toj.20.0034>