

Case Report

Chronic Uterine Inversion: A Case Report of Rare Cause of Secondary Infertility

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Abstract

Correspondence: This article looks at Chronic Uterine Inversion as a possible cause of Secondary Infertility and successful pregnancy and delivery after Abdominal surgery for Uterine replacement using Haultain's procedure

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INTRODUCTION

Secondary infertility is a common presentation in the gynaecology outpatient department, with varied causes. Uterine inversion, a rare complication of poorly managed third stage of labour, is life threatening especially when accompanied by Primary postpartum haemorrhage and shock¹. It is the prolapse of the uterine fundus into the uterine cavity, the cervix, the vagina and sometimes outside the vaginal introitus². This can go unnoticed following vaginal delivery only to present late as chronic uterine inversion. In such situations, the patient may experience difficulty with coitus, and inability to achieve conception. The index patient presented 5 years following vaginal delivery at home with failure to conceive. She had abdominal surgery to replace the uterus, Haultain's procedure, and two years later conceived and delivered.

CASE REPORT

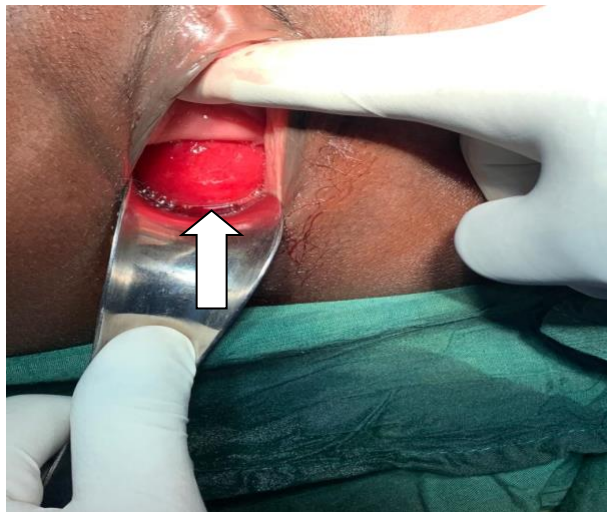
A 25-year-old married nomadic Fulani woman, a P1⁺⁰ 1 alive was referred to our facility with complaints of excessive and prolonged menstrual bleeding of 5 years duration and inability to conceive for 3 years.

She had been having heavy and prolonged menstrual periods lasting for about 10 days following her last delivery with associated passage of clots, generalised body weakness and dizziness. There was a history of

post-coital bleeding and feeling of a swelling in the vagina with recurrent vaginal discharge and dyspareunia. She had also been unable to conceive despite regular, unprotected and adequate sexual intercourse for 3 years. There is no history of contraceptive use, abnormal hair distribution or hoarseness of voice. She had no heat or cold intolerance; neck swelling or change in bowel habits. A history of persistent headaches, blurring of vision or abnormal breast discharge was also not found in her. There was also no excessive weight gain or history suggestive of radiation exposure in the couple and they neither smoked cigarettes nor drank alcohol.

She had a term pregnancy 5 years before presentation with spontaneous onset of labour and delivery which was conducted at home. There was no history suggestive of prolonged labour, however, the placenta was delivered by excessive force with associated bleeding that was managed at home. She had been having symptoms of anaemia which necessitated multiple transfusions at the referral centre.

On examination, she was pale, her heart rate was 112 beats per minute, her blood pressure was 110/70mmHg, and her temperature was 36.8°C. Systemic examination was unremarkable. Speculum examination revealed a globular hyperaemic mass about 2cm from the introitus. The mass had a smooth surface measuring about 8x6cm with a cervical ring felt around the mass. The uterine fundus could not be felt on bimanual examination.



Arrow: Prolapsed mass (inverted uterine fundus) in the vagina about 2 cm from the introitus



Arrow: Dimple created by the inverted uterine fundus

Laboratory findings revealed her packed cell volume to be 13% and ultrasonography did not visualise the uterus in the pelvis. Other biochemical markers were within normal limits. She had 4 units of blood transfused which raised her post-transfusion packed cell volume to 30%. She subsequently had uterine reduction by Haultain's method.

Two years later, the patient presented to our facility with a five-month history of amenorrhea and an ultrasound scan confirmed a viable singleton intrauterine gestation at 24 weeks. She booked for antenatal care, had

3 visits and was planned for admission at 36 weeks for an elective caesarean section at 38 weeks of gestation. However, the patient was lost to follow-up and subsequently had a home delivery at term.

DISCUSSIONS

Chronic uterine inversion is rarer compared to acute uterine inversion. Most of the time it follows an unnoticed puerperal or acute uterine inversion. Chronic uterine inversion also known as non-puerperal uterine inversion can result from conditions such as endometrial polyps, and submucous fibroids located on the fundus^{3,5}. However, predominantly, it is as a result of undetected low-degree puerperal uterine inversion^{5,8}.

Uterine inversion is classified based on the timing of its detection into acute, subacute and chronic with a prevalence of 83.4%, 1.6% and 13.9% respectively. The patient presented 5 years after vaginal birth with a painless mass in the vagina, associated with heavy and prolonged menstrual flow, pain during coitus and inability to conceive. Placing her in the chronic category. Risk factors for acute uterine inversion include poorly managed third stage of labour; delayed third stage of labour; uterine atony; premature cord traction before placenta separation, and morbidly adherent placenta^{4,9}. Others are a short umbilical cord and foetal macrosomia. The predisposing factors for chronic uterine inversion are as follows: connective tissue disorders like Marfan's and Ehlers-Danlos syndrome; large uterine fibroids and endometrial cancer in addition to the risk factors above for acute uterine inversion that may present late.

Patients with chronic inversion commonly complain of discomfort or pain during vaginal intercourse, prolonged or heavy menstrual bleeding, abnormal vaginal discharge due to sloughing of the infected endometrium and a history of postpartum haemorrhage^{5,10}. Other symptoms they equally present with are: dyspareunia, low backache, pelvic pain and secondary infertility. Our patient had irregular and heavy menstrual flow, difficulty with achieving penetration and pain during intercourse and inability to conceive as her main problems.

The diagnosis of uterine inversion, especially the acute type is usually clinical. However, in those with chronic uterine inversion, examination under anaesthesia alone or radiological investigations like ultrasound scan and Magnetic Resonance Imaging MRI are deployed for confirmation following clinical suspicion^{4,11}. Hsieh and Lee described the sonographic findings typically seen in patients with chronic uterine inversion, where a hyperechoic mass is seen in the vagina with a central hypoechoic H-shaped cavity. A careful digital bimanual pelvic examination in the clinic or during examination under anaesthesia can lead to a diagnosis in the majority

of instances where the vaginal mass is usually felt as having a broad base terminating into the constriction ring at the isthmic or cervical part of the uterus as opposed to the finding with endometrial polyps where a stuck will be identified entering the cervical canal into the uterine cavity. In some cases, attached to one side of the cervical surface.

Treatment of patients with chronic uterine inversion depends on the clinical presentation. If the patient has been having excessive and prolonged menstrual flow like in the index case, the patient will benefit from resuscitation which may involve optimising blood levels through transfusion. Treatment of infection with broad-spectrum antibiotics for those with infections as seen in cases with sloughing and infected masses from the prolapse. The definitive treatment of chronic inversion entails a surgical reduction of the prolapsed uterine fundus which can be by vaginal or abdominal procedures. Two abdominal procedures, the Huntington and Haultain procedures have been described for this purpose⁶. Our patient benefited from the later.

Few investigators have reported the return to fertility after the reduction of chronic uterine inversion. Good pregnancy outcomes have been reported after the Haultain's procedure^{7,12}. Little wonder, our patient presented 2 years after repair at about 24 weeks of gestation and had antenatal evaluations with 3 follow-up visits. She was scheduled for planned elective caesarean delivery at term because of the reported risk of uterine rupture in labour and also a risk of morbidly adherent placenta. The patient, however, defaulted but called to inform us that she had a home delivery, with both newborn and mother in good condition.

CONCLUSION

In conclusion, chronic uterine inversion commonly results from an undiagnosed puerperal uterine inversion, just as in the case presented. Available literature supports a causal relation between chronic uterine inversion and secondary infertility. Careful evaluation and treatment usually reverse the fertility problems associated with this condition.

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