Case Report

Chronic Uterine Inversion as a Rare Complication of Mismanaged Labour: A Case Report

Chidiadi Nathan Ekpe, Assumpta Nnenna Nweke, Chuka Nobert Obi, Silas Nwali, Francis Okoroafor, Ifeanyichukwu Oka, Emmanuel Nwokwu, Justus Ndulue Eze

Department of Obstetrics and Gynaecology, Alex Ekwueme Federal University Teaching Hospital, P.M.B.102, Abakaliki; Ebonyi State, Nigeria

Corresponding author: ***Assumpta Nnenna Nweke.*** *Department of Obstetrics and Gynaecology, Alex Ekwueme Federal University Teaching Hospital, P.M.B.102, Abakaliki; Ebonyi State, Nigeria.* Ninasophia4iyke@gmail.com *+2348035489950*

Article history: Received 24 April 2026, Reviewed 10 May 2026, Accepted for publication 20 June 2026

ABSTRACT

Background: Chronic uterine inversion is a very rare condition that commonly follows mismanaged labour. This study aims to bring to fore the possibilities of uterine inversion in a woman months after delivery with symptoms not as dramatic as is the case in the acute form and also to show that there is need for training and retraining of workers involved in conducting deliveries in rural areas.

Case report: The index patient presented a year after delivery at a Maternity home with bleeding per vaginam that has been there since confinement. A diagnosis of chronic uterine inversion was made following examination and ultrasonography. She subsequently had laparotomy and reduction of the inversion with good outcome.

Conclusion: A high index of suspicion is required to make the right diagnosis so as to manage appropriately.

Keywords: Chronic uterine inversion, rare, mismanaged labour

How to cite this article

Ekpe CN, Nweke AN, Obi CN, Nwali S, Okoroafor F, Oka I, Nwokwu E, Eze JN. Chronic Uterine Inversion as A Rare Complication of Mismanaged Labour: A Case Report. The Nigerian Health Journal 2026; 26(2):911 – 915.
https://doi.org/10.71637/tnhj.v26i2.1410

Print ISSN: 0189-9287 Online ISSN: 2992-345X

INTRODUCTION

Uterine inversion is an uncommon obstetric and rarely a gynaecologic condition which occurs due to the in folding of the uterine fundus into the uterine cavity and/or beyond the cervix.[1] It is a rare complication of either the second or third stage of labour.[1] It is a very rare condition and may not be notice until much later when it presents as chronic uterine inversion.[2]Acute Uterine inversion occurs in approximately 1 in 20,000 to 1 in 50,000 deliveries, however, chronic uterine inversion is even rarer.[1] When undetected or improperly managed in the acute phase, it can progress into a chronic uterine inversion.1Inversion varies in degree from a mere dimpling of the fundus to involvement of the whole uterus and cervix.[3] Chronic uterine inversion remains heavily prevalent in resource-limited areas where deliveries are frequently conducted by untrained traditional birth attendants.[4] Managing chronic uterine inversion necessitates specialized, highly invasive surgical interventions to reposition the uterus.[5]

This case highlights a rare presentation of a preventable obstetric complication originating from a mismanaged labor. Ultimately, this case serves as a reminder of the need to strengthen rural obstetric care infrastructure and provides clinicians with a valuable framework for navigating a rare, high-stakes gynecological dilemma.

CASE REPORT

Mrs. LN, was a 17-year-old para 1^{+0} nurse aid with one living child, who hails from and resides in Ebonyi State, Nigeria. She presented with complaints of irregular vaginal bleeding and feeling of a mass in her vagina since after her delivery 13 months prior to presentation, and an episode of fainting which occurred 3 days prior to presentation.

Her problems started 13 months prior to presentation after her first vaginal delivery in a maternity home where she worked. The pregnancy was desired, spontaneously conceived, uneventful, and carried to term. Her antenatal care was at the maternity home. Labour was spontaneous and supervised by the nurse at the maternity. The labour lasted about 14 hours. She had vaginal delivery, aided by fundal pressure, of alive female neonate (birthweight was not checked by scale) who cried spontaneously and was alive and well. The placenta was forcefully delivered, as the process was very painful. After placental delivery, there was mass protruding from her vagina, outside the introitus. The mass was associated with vaginal bleeding, passage of clots and dizziness, for which she was given some medication which names she did not know. No specific diagnosis was made nor therapy offered for the mass. One day after her delivery, she was reassured that the protruding mass would spontaneously resolve with time, and then discharged home. Unfortunately, she continued to bleed off and on, was not able to tell when her lochia stopped and menses started. Over time, though, the protrusion became smaller, and receded into the vagina. But the protrusion usually felt bigger during defecation and coughing, and traumatized following sexual intercourse with her husband. She had pain and vaginal bleeding during and after sex, and these made her afraid of having sex. There was no history of vaginal instrumentation in labour and no history of episiotomy or perineal laceration. About 3 months postpartum, she sought care at a secondary hospital where she was managed for an undisclosed diagnosis with manual vacuum aspiration, to no avail. Following this, she also used self-sourced oral herbal medications without relief and her symptoms persisted. Three days prior to presentation, she fainted while at home, but regained consciousness after sometime. There was no history of trauma to the head or chest. She had never been transfused. It is for the above symptoms that she presented to us for expert care. Her menarche was at 13 years, and she had a 5-day flow in a regular 28-30 days menstrual cycle. There was no dysmenorrhea. She did not use any form of contraception, and was unaware of cervical cancer screening. She did not have any co-morbidities like hypertension, or diabetes mellitus, or known drug allergies, and had not had any surgery in the past. She did not know her blood group and hemoglobin genotype. She was the only wife of her husband, a 28-year-old machine operator who works at Timber Shed in Ebonyi State. She neither drank alcohol nor used tobacco in any form. A review of her systems was not contributory.

One examination, she was a young and anxious-looking, but not in any obvious distress. She was pale, but not febrile, jaundiced, or dehydrated, and had no pedal edema. The respiratory rate was 18cycles/minute, and SPO_2= 100% on room air. Her chest was clinically clear, pulse rate was 86beats/minute full volume and regular, blood pressure 110/70mmHg, heart sounds 1 and 2, no murmurs. The abdomen was flat and moved with respiration. There was no area of tenderness, her liver, spleen, and kidneys were not enlarged. There was no palpable mass. Vaginal examination revealed a normal vulva stained with blood. On speculum examination, there was a round, soft-surfaced mass within the vagina

Print ISSN: 0189-9287 Online ISSN: 2992-345X

that ballooned and descended slightly on coughing. The cervix could be seen as a shiny rim high in the vagina around the base of the protruding mass. The mass bled on contact. On bimanual examination, the uterus could not be delineated above the cervix. The adnexa were free and the pouch of Douglas was empty. The examining gloved fingers were smeared with blood. A diagnosis of chronic uterine inversion was made. The differential diagnosis was endometrial or cervical polyp or myoma that got extruded through the cervical os.

Laboratory investigations revealed a packed cell volume of 20%. Other haematological and biochemical parameters were within normal limits. Ultrasonography of the pelvis could not visualize the uterus in the pelvis. A diagnosis of chronic uterine inversion to rule out cervical polyp with anemia was made. She was transfused three units of packed red blood cells with her post transfusion packed cell volume to 29%. A laparotomy was carried out; a cup shaped depression was seen with pulling in of the round ligaments (Fig. 1).

The uterus was pulled up with a volsellum and the anterior rim of the cup incised through both the thickness of the inverted wall (Fig. 2). The inverted fundus was pulled up from above, aided by a finger passed through the vagina. The uterine incision was sutured with interrupted no 1 vicryl and haemostasis was achieved. Her postoperative period was uneventful and patient was discharged on the 7th day. Patient has had two follow up visits and have had no complaints.

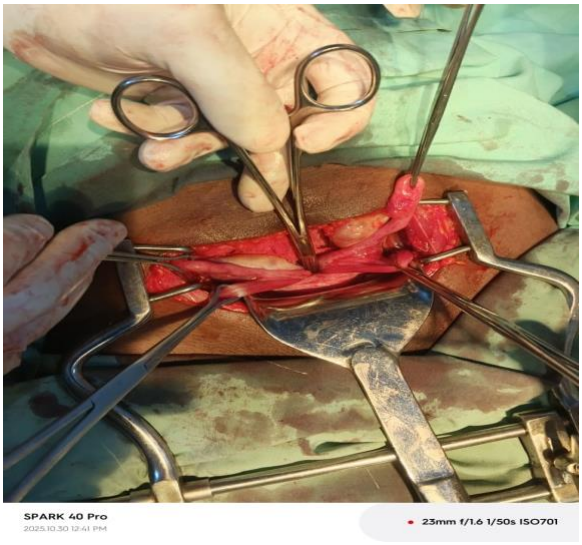

Fig 1: Artery forceps at the point of uterine inversion

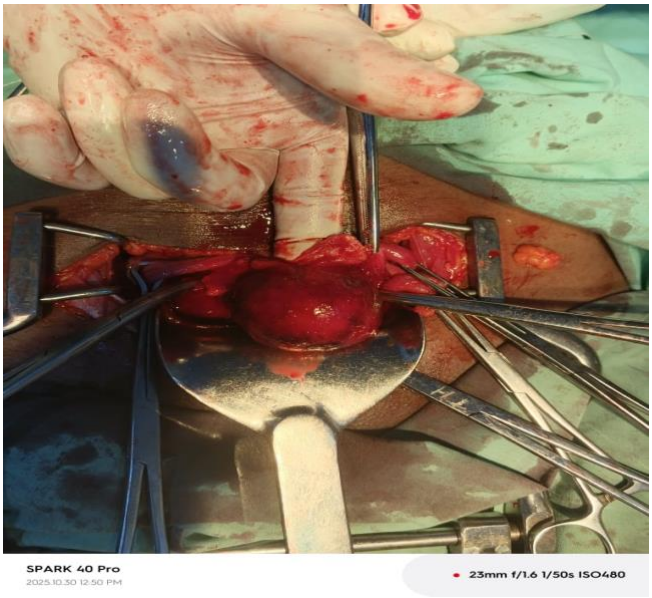

Fig 2. Showing the inversion of the fundus into the uterus after anterior incision

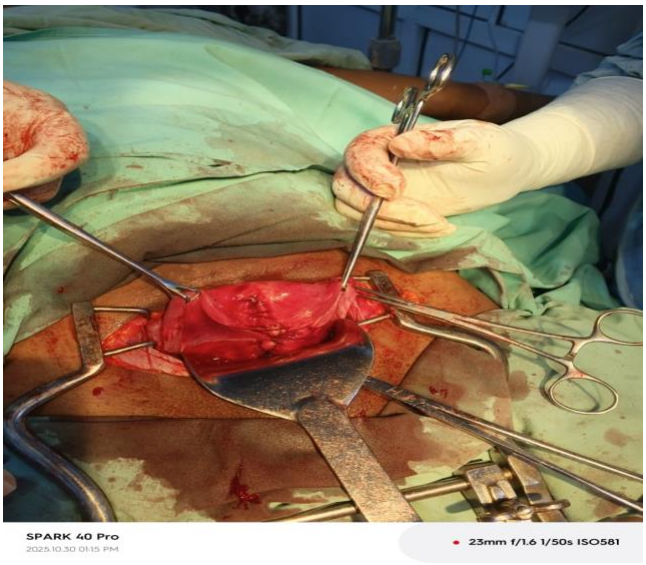

Fig 3. Repaired uterus

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DISCUSSION

Chronic uterine inversion is a rare and severe gynaecologic condition.[6,7] Making a diagnosis of incomplete uterine version may be difficult and thus, may then progress to a chronic condition. This patient presented with protrusion into the upper vagina and bleeding per vaginam that lasted for up to one year. It can be classified either puerperal or non-puerperal based, complete or incomplete depending on the position of the uterine fundus. The index patient had puerperal and complete uterine inversion as seen in Fig 1. Puerperal inversion can also be categorized based on the time difference from delivery to presentation of inversion. Where acute inversion occurs within the first 24 hours of delivery, sub-acute inversion occurs after 24 hours to 4 weeks. Chronic inversion occurs from 4 weeks and above and often follows unnoticed post-partum inversion. Our patient had chronic uterine inversion as she presented 1 year after delivery.[8]

The exact cause of uterine inversion is not clear but multiple predisposing factors are known. They are multiparity, application of fundal pressure in the second or third stage of labour, short umbilical cord and extensive cord traction in the third stage. The inversion may be incomplete at the time of delivery which progresses during puerperium.[8] our patient had fundal pressure applied in labour.

The patient complained of irregular bleeding with onset from delivery till the time of presentation. There may be a history of anaemia as seen in this patient with associated symptoms such as weakness. Other symptoms include dyspareunia, abnormal vaginal discharge due to sloughing of the infected endometrium, low backache, pelvic pain and secondary infertility.[2, 8,9]

On examination the inverted uterus was confused as polyp, uterine. Ultrasonography and magnetic resonance imaging techniques used when the diagnosis is uncertain.[10,11] Ultrasound done in this patient showed absence of a fundus which points to uterine inversion.Initial management is to correct hypovolemic shock, if any and correction of anaemia.[11] Surgical intervention is necessary in the management of chronic uterine inversions as the walls of the chronically inverted organ are in a state of complete involution with retraction and little elasticity. Chronic inversion is managed with either Haultain's or Huntigton's abdominal operation and the two vaginal surgeries; Spinelli's and Kustner's techniques. Spinelli and Kustner operations involve replacing the uterine fundus through the anterior and posterior transections respectively.[10,12] The abdominal route is preferred over the vaginal as the incision of the uterus is minimal, traction on the round and broad ligaments helps in repositioning and the uterine wall can be more accurately sutured and haemorrhage more efficiently controlled. In this patient, an anterior incision was made on the uterus with subsequent reduction of the inversion and repair as shown in Fig 3. Anterior incision will help prevent adhesion to the gut. Patient was followed up and there was no problem.

It is important to note that patients who have experienced uterine inversion need to be counseled that they run the risk of recurrence in subsequent pregnancies [10] but successful pregnancies have been achieved following reduction of uterine inversion.[12]

Strength of the study

The case critiqued dangerous obstetric practices in maternal care within rural areas in low-and-middle-income countries (LMICs). The case also illustrated how to differentiate uterine inversion from differential diagnosis like cervical or endometrial fibroids (myomas) and polyps. It highlighted the failure of definitive diagnostic tool like pelvic ultrasonography from being able to visualize the uterus in its normal anatomical position. Furthermore, the inclusion of the patient's postoperative trajectory; specifically noting that she was discharged on day 7 and remained symptom-free across two subsequent follow-up visits also strengthened the case report.

Limitation of the study

While this case report gave clear details of a successful outcome in the management of this rare condition**,** the birth weight of the newborn was not checked by scale. Macrosomia with inability to deliver often necessitates fundal pressure which is a known risk factor for uterine inversion.

Implications of the findings of the study

This case emphasizes that simple, structured clinical exams are often superior to high-tech interventions. Manual Vacuum Aspiration (MVA)—was done because a bimanual examination was not done as this would have revealed absence of a fundus. The report proves that abdominal repositioning through surgery is highly effective for chronic cases. However, because the uterine wall was incised through its full thickness and sutured, future pregnancies could be complicated by increased risk of uterine rupture.

Print ISSN: 0189-9287 Online ISSN: 2992-345X

Uterine inversion was due to mismanaged labour. This highlights an urgent need for the Nigerian Ministry of Health to aggressively regulate, audit, and provide continuous training for staff operating in our local maternity homes.

CONCLUSION

Chronic uterine inversion is a rare complication of mismanaged labour and a high index of suspicion is required to make a diagnosis.

Acknowledgements: None.

Contribution list: NE and AN reviewed the patient at the clinic. JE, IO and CO performed the surgery. AN, SN, FO and EN were involved in the writing the manuscript. JE revised the manuscript for intellectual content. All authors read and approved the final manuscript and agreed to be accountable for all aspects of the work.

Funding: None

Conflict of Interest: There is no conflict of interest.

Patient's consent: The authors certify that all appropriate patients' consent have been obtained. The patient gave her consent for their clinical information to be reported in the journal. The patient also understand that her name and initials will not be published and due efforts will be made to conceal her identity.

Ethical Statement: Ethical standards were maintained in the writing of the manuscript

Availability of Research Data: Authors are available and ready to supply the data upon any requests through the corresponding author.

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Print ISSN: 0189-9287 Online ISSN: 2992-345X