

Non Puerperal Uterine Inversion: Case Report

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Abstract

Non-puerperal uterine inversion is an extremely rare medical and surgical emergency. It is more commonly described in obstetrics, exposing the mother to the risk of cataclysmic delivery haemorrhage.

We report the case of a 48 year old patient presenting with acute 4th degree uterine inversion on a submucosal fundial myoma. Total interannexal hysterectomy was performed via a double approach: vaginal and laparoscopic. The laparoscopic approach enabled the diagnosis to be confirmed and the hysterectomy to be performed in complete safety.

Key words: Uterine inversion, non-puerperal, hysterectomy, laparoscopy, case report.

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I. Introduction

Uterine inversion is the invagination of the uterus in the shape of a finger. Non-puerperal uterine inversion is a rare gynaecological condition which poses diagnostic and therapeutic problems. It is a serious complication which can be life-threatening due to hypovolaemic shock.

This unusual complication may lead to a delay in diagnosis. The main differential diagnoses are: a fibroid delivered through the cervix or pelvic organ prolapse. The true incidence is unknown and most publications are in the form of case reports.

We report the case of a 4th degree uterine or puerperal inversion in a 48 year old postmenopausal woman.

II. Patient and observation

Patient information: Patient aged 48 G2 P2, menopausal at the age of 45. She had no previous surgical history and had been followed up for a submucosal fibroid. She had been admitted urgently to another hospital five days previously for vaginal bleeding and a mass protruding through the vagina. This metrorrhagia had led to a state of shock with a haemoglobin level of 6 g/dl, requiring a transfusion of 3 units of packed red blood cells.

She was urgently referred to our hospital for management.

Diagnosis: Clinical examination revealed a friable mass delivered through the vagina. Vaginal touch revealed no cervical relief (Figure 1).

A transabdominal ultrasound scan was performed, but was unable to visualise the uterus in the pelvic position. A type 4 non-puerperal uterine inversion with a uterine myoma was strongly suspected.

Therapeutic intervention : We decided to operate on the patient urgently by a mixed vaginal and laparoscopic route.

The first laparoscopic step was diagnostic to confirm uterine inversion: the uterus was not visible in the abdominal cavity. The anatomy of the pelvis was altered due to traction of the proximal part of the round and ovarian ligaments and the uterine tubes, as well as the bladder, inside the inverted uterus (Figure 2).

A combined laparoscopic and vaginal hysterectomy was indicated.

We began with a vaginal myomectomy (figure 3) followed by the Haultain procedure [1], which consists of making an incision on the posterior surface of the uterus to cut in half the cervical constriction ring, which prevents reduction of the inversion. Consequently, a posterior longitudinal incision (5 cm) was made at the level of the ring of constriction which trapped the uterus to allow its reversion (figure 4).

Once reversed, a total interadnexal hysterectomy was performed laparoscopically (Figure 5,6).

Follow-up and results: Our patient was discharged from hospital 5 days after her operation, and the anatomopathological study confirmed the diagnosis of submucosal fibroma.

III. Discussion

Uterine inversions are classified into two groups: inversions of puerperal origin due to obstetrical problems and inversions of non-puerperal origin due to gynaecological problems [2], [3].

While puerperal uterine inversion is a complication, non-puerperal uterine inversion is still exceptional and the literature reports only sporadic cases [4].

Non-puerperal uterine inversion is frequently caused by a submucosal leiomyoma, which accounts for 70% of cases and is prevalent in black women of African origin [5]. However, it can sometimes be due to a malignant tumour in 80% of cases, which justifies an anatomopathological investigation [6].

From a pathophysiological point of view, its mechanism has not been clearly elucidated, but it is thought that it may occur in certain situations: size and fundial location of the tumour, pedunculated tumour, rapid tumour growth and abrupt expulsion of the tumour through the cervix [7]. Two conditions are necessary for uterine inversion to occur: uterine hypotonia and sufficient cervical dilatation. In our patient it was due to a type 0 fundic myoma.

In practice, there are two types of classification depending on the anatomical stage and duration.

Four anatomical stages have been described [8] :

- **Stage I:** the uterine fundus is depressed in the shape of a "bottom of a flask" or cup without reaching the cervical os.
- **Stage II:** the uterus is inverted and passes through the cervical os
- **Stage III:** the uterine body is in the vagina and can be exteriorised
- **Stage IV:** total inversion, participation of the vaginal walls in the inversion

Depending on the periodicity :

- **Acute inversion** if diagnosed within the first half hour, i.e. before the appearance of the cervical ring.
- **Inversion is subacute** if diagnosed after half an hour.
- **Chronic inversion** if discovered after 30 days.

Treatment of uterine inversion depends on the stage of the inversion and the desire to become pregnant: treatment is conservative when reduction of the uterine inversion is possible, which is the case for 1st or 2nd degree inversions. Treatment is radical in the case of 3rd and 4th degree uterine inversion, and in all cases where there is no desire to become pregnant [9].

Hysterectomy can be performed by several routes: vaginal, with technical difficulties due to changes in anatomical landmarks, or abdominal, which requires reduction of the inversion with restitution of the uterus in the pelvic cavity.

The combined laparoscopic-vaginal management described by d'Auber et al [10] appears to be the best approach, enabling the diagnosis to be confirmed, the degree of ischaemia due to utero adnexal devascularisation to be assessed, and the hysterectomy to be carried out in complete safety; we chose this option for the management of our patient.

IV. Conclusion

Non-puerperal uterine inversion is a rare and serious complication, presenting a diagnostic challenge that is often performed intraoperatively. Hysterectomy by a double laparoscopic and vaginal approach appears to be the technique that provides the greatest operative safety.

Conflicts of interest

The authors declare no conflict of interest.

Authors' contributions

Lounas BENGHANEM: data collection, bibliographic research and writing of the article.

Lydia FAÏD: proofreading and supervision of the writing of the article.

Kamel HAÏL: proofreading and supervision of the writing of the article.

Figures

Figure 1: IV degree uterine inversion with submucosal myoma

Figure 2: Intrauterine aspiration of adnexa and bladder wall

Figure 3: Vaginal myomectomy

Figure 4: HAULTAIN procedure

Figure 5: Uterus reintroduced into the pelvis

Figure 6: Result after hysterectomy



Figure 1 : IV degree uterine inversion with submucosal myoma

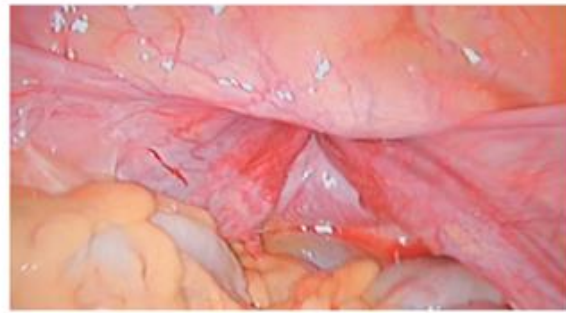


Figure 2 : Intrauterine aspiration of adnexa and bladder wall



Figure 3 : Vaginal myomectomy



Figure 4: HAULTAIN procedure



Figure 5 : Uterus reintroduced into the pelvis

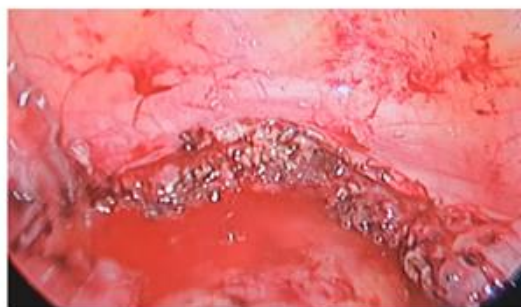


Figure 6 : Result after hysterectomy

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