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Chronic Idiopathic Non Puerperal Uterine Inversion: Case Report

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Abstract **Case Report**

We present the case of a 50-year-old patient with type 2 diabetes, who had two late abortions on a cervical insufficiency and a premature delivery at 34 weeks of amenorrhea following a cervical cerclage The patient was referred to our clinic for chronic pelvic pain and a mass in the vagina that had been present for one year. Upon examination, we noted a mass externalised at the vulva, with no visualisation of the external foramen of the cervix and no palpation of the uterine fundus. A suprapubic ultrasound confirmed the absence of the uterus in pelvic position, leading to a diagnosis of complete uterine inversion. The patient underwent a total vaginal hysterectomy with simple postoperative management. An anapathological examination confirmed the diagnosis of idiopathic uterine inversion.

Keywords: Uterine Inversion, Chronic Pelvic Pain, Vaginal Mass, Delayed Diagnosis, Idiopathic Uterine Inversion.

INTRODUCTION

Non-puerperal uterine inversion is a very rare gynecological complication, arising from a number of predisposing factors, is not very common, and may result in delayed diagnosis. The main differential diagnosis is a fibroid delivered through the cervix [1].

We report a case of idiopathic non puerperal uterine inversion revealed by pelvic pain that had been evolving for 1 year.

OBSERVATION

A 50-year-old housewife, menopausal for 2 years, with a 3-year history of type 2 diabetes on metformin, two late spontaneous abortions in the context of an untreated cervical insufficiency, and a premature delivery at 34 weeks' gestation after cervical cerclage, presented in consultation for chronic pelvic pain of the heaviness type and a sensation of a ball in the vagina, evolving for a year, making daily activity and quality of life very impaired, without abnormal uterine bleeding.

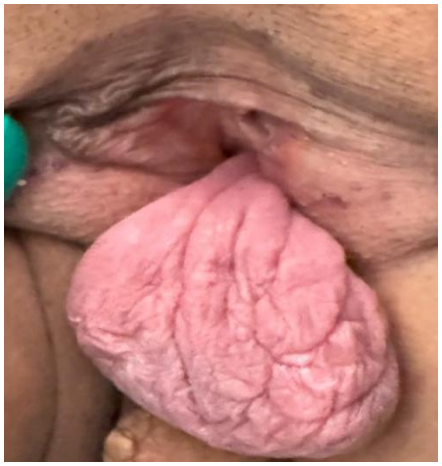

Figure 1: Uterine inversion 3rd degree

Clinical examination revealed a hemodynamically stable patient, with a voluminous mass measuring 8 cm long at its long axis, reshaped and externalized at the vulva, whose cervical or uterine origin was difficult to assess. The cervix could not be visualized when the speculum was inserted, and the vaginal touch failed to detect the uterine fundus or the external orifice of the cervix.

Fig 2: External orifice not visible

Abdominal pelvic ultrasound shows a pelvis devoid of uterus. The ovaries were not visualized. The diagnosis of chronic uterine inversion of 3 th degree was retained.

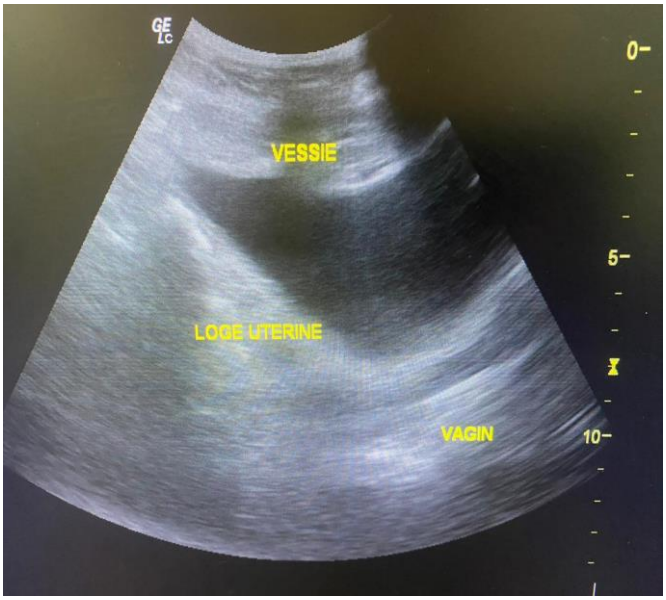

Figure 3: Uterus not seen in pelvic position on suprapubic ultrasonography

Following an unsuccessful attempt at manual reduction using the haultain procedure, a total vaginal hysterectomy was performed. The postoperative course was straightforward. Anatomopathological study confirmed the diagnosis of idiopathic uterine inversion.

Figure 4: Total vaginal hysterectomy on uterine inversion

DISCUSSION

Uterine inversion, an extremely rare complication, is defined as the abnormal protrusion of the internal surface of a uterus relaxed by the vaginal orifice following uterine hypotonia and significant cervical dilatation [2].

It is classified into two main categories: puerperal or obstetric, which is more frequent and more serious, involving the vital prognosis, and non puerperal or gynecological, which is exceptional, with around 303 cases reported in the literature up to 2018, including 30 cases of complete uterine inversion [3]. It may be idiopathic or associated with predisposing factors such as benign uterine tumors in 70-80% of cases (leiomyoma, endometrial polyps), or a malignant tumor in the remaining cases, particularly in young women (leiomyosarcoma, mixed Müller sarcoma, rhabdomyosarcoma, endometrial and cervical carcinoma).

Classification according to degree of inversion ,first degree: the uterine fundus invaginates and protrudes into the uterine cavity, without externalizing beyond the cervix ,second degree: the uterine fundus invaginates, protrudes into the uterine cavity and protrudes into the vagina through the cervix, without protruding beyond the vulva ,third degree: the uterine fundus invaginates, passes through the cervix and protrudes beyond the vulva ,fourth degree with involvement of the vaginal walls [4].

The location of the uterine fundus in relation to the cervix enables us to differentiate between two entities: incomplete uterine inversion, where the uterine fundus does not pass through the cervix, and complete uterine inversion, where the uterine fundus protrudes through the cervix. The purpose of this classification is prognostic: only complete uterine inversion can lead to the formation of a rigid oedematous ring by the cervix, making it difficult to reduce the inversion and thus worsening morbidity and mortality [5].

Clinically, non-puerperal uterine inversions are chronic and present poorly or sometimes asymptomatically. Symptoms include vaginal discharge or bleeding, which can lead to haemorrhagic shock with severe anaemia, abdominopelvic pain or heaviness, a vaginal mass and urinary function signs such as dysuria, pollakiuria or burning [6].

Clinical examination can contribute to the diagnosis by palpation of a vaginal mass without uterine fundus on bimanual examination [7]. Trans-vaginal ultrasound with 3D power Doppler in contact with the uterine body was used by Zohav *et al*., to visualize the change in course of the uterine arteries, which migrate to a central, longitudinal position towards the inverted uterine fundus. MRI confirms the diagnosis, showing a disruption of the uterine architecture, with a “U”-shaped appearance of the uterine fundus in complete inversion and a “Y”-shaped appearance in incomplete inversion. It also allows us to search for a favourable factor, in particular a submucosal fibroma of the uterine fundus, and to eliminate differential diagnoses, notably fibromas delivered through the cervix and endometrial polyps.

High clinical suspicion with typical imaging data is often sufficient to establish the diagnosis. In cases of uncertainty, laparoscopy or biopsy of the mass may be performed [8].

Therapeutic management depends essentially on age, degree of inversion, desire for pregnancy and malignancy. When reduction of uterine inversion is possible, mainly in cases of 1st or 2nd degree uterine inversion, conservative treatment, notably the Haultain

procedure, appears to be the most effective method for achieving repositioning. Radical treatment is preferred in the absence of a desire for pregnancy, and is virtually indispensable in cases of 3rd and 4th degree uterine inversion [9].

Hysterectomy via the vaginal route exposes the surgeon to technical difficulties due to changes in the usual anatomical landmarks, particularly with regard to the urinary excretory tract. The abdominal route has also been described, but requires reduction of the inversion, with restitution of the uterus in the pelvic cavity. The combination of laparoscopy and the vaginal route appears to be a good alternative for confirming the diagnosis and assessing the degree of ischemia of the adnexa. Uterine artery embolization is indicated in chronic non-puerperal uterine inversions, generally of the 2nd and 3rd degree, and preoperatively to limit blood loss [10].

CONCLUSION

Uterine inversion is a very rare entity, presenting a diagnostic challenge given its low incidence and the number of differential diagnoses. Suprapubic ultrasonography and MRI help confirm the diagnosis and suggest appropriate management.

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