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REVIEW ARTICLE

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Acute Neglected Non-Puerperal Uterine Inversion about a Case at the Mother and Child Health Center (CSME) in Zinder

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ABSTRACT

Introduction: Uterine inversion is defined as an invagination of the uterine fundus in a “finger-like inversion”, which protrudes through the vagina and vulva. It is a rare pathology, more common in obstetrics than in gynecology. The objective of the study was to report a case of acute neglected non-puerperal uterine inversion treated at the CSME of Zinder.

Clinical Observation: We describe a case of non-puerperal uterine inversion in a 45-year-old woman G10P7V5A3 housewife referred from a district hospital for mass protruding from the vagina evolving for several weeks, she had a history of several hospitalizations for blood transfusion and one reports a notion of attempted vaginal ablation of the myoma with failure. On a functional level, she presented the clinical picture of metrorrhagia associated with pelvic discomfort. On general examination the conjunctivas were discolored. The uterus is not palpable above the pubis. On inspection of the vulva, we note the presence of a multilobed, fleshy mass with a reddish appearance overlooked by a whitish mass bleeding on contact and a discharge of pus. The mass appears myomatous in appearance and overhangs the invaginated uterine fundus. The diagnosis of uterine inversion due to myoma was made. The blood count showed microcytic normochromic anemia with a hemoglobin level of 6.6g/dl, white blood cells of 8.3103 and rhesus B positive blood group. She received a blood transfusion before surgery. Myomectomy was the first procedure then laparotomy with posterior median incision of the uterus with repositioning of the uterus in the abdominal cavity and total hysterectomy with preservation of the adnexa was performed.

Conclusion: non-puerperal uterine inversion is rare. We found a case of neglected acute uterine inversion in a multiparous patient with a uterus carrying a myoma, in whom the attempt to extract a myoma delivered through the cervix resulted in acute uterine inversion, the diagnosis of which and treatment was provided late. The treatment was radical surgery.

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Introduction

Uterine inversion is a rare condition in a non-puerperal uterus [1]. It occurs most often in the immediate post-partum period, where it is defined as an exceptional obstetric hemorrhagic complication, which can compromise the mother's vital prognosis [1]. The uterus turns over like a finger, due to the development of a benign or malignant process at the fundic level, most often a fibroid [2]. The acute manifestation is a sudden expulsion of the uterus accompanied by pain and haemorrhage, while the chronic manifestation is pelvic discomfort and irregular uterine bleeding until the uterus finally protrudes through or out of the vagina [3].

We describe the observation of a neglected acute non-puerperal uterine inversion, following an attempted vaginal removal of a uterine myoma.

Clinical Observation

Ms K.G, 45 years old, housewife G10P7V5A3 with no formal education, resident of a rural area, referred from a district hospital for uterine prolapse and fever according to the referral's own term. Her history included several hospitalizations and blood transfusions for anemia due to blood spoliation. In her history, the patient reported that she had been consulting for 12 months ospitalizations and blood transfusions for anemia due to blood spoliation. The mass was diagnosed as a cervical myoma. An attempt to extract the myoma was made in the District, but was unsuccessful, with complete externalization of the mass. In view of this complication, oral treatment was instituted. However, given the persistence of significant vaginal discomfort with malodorous purulent discharge, she decided to return to the District hospital 7 days later, hence her referral to the CSME in Zinder.

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Examination on admission found the patient conscious asthenic, with pale conjunctivae and mucous membranes, hyperthermia at 38°7C, blood pressure at 120/80 mmHg and Pulse at 112/minutes.

Inspection of the vulva revealed a large, reddish, fleshy multilobed mass surmounted by a whitish mass exteriorized through the vagina, bleeding on contact with the presence of nauseating pus. The mass appeared myomatous and overhung the invaginated uterine fundus. Exploration of the vagina was impossible.

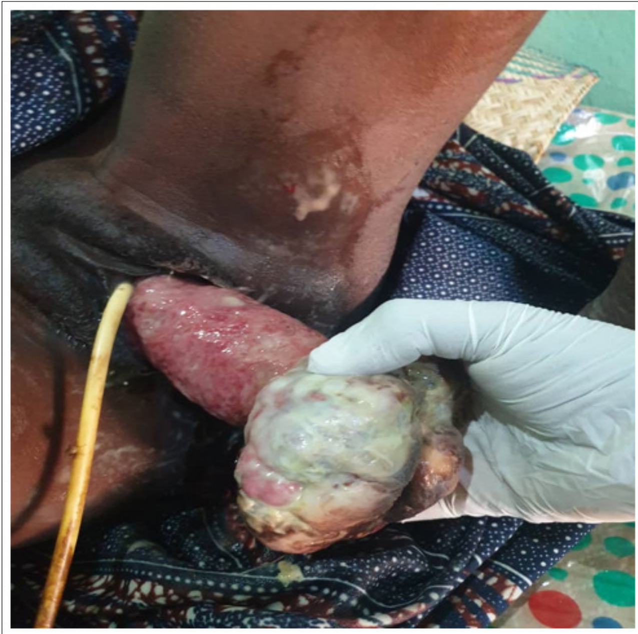

Figure 1: Multilobed Fundic Mass Overlying Whitish Mass and Pus

Biological findings included a leukocyte count of 8000/mm³ and severe anemia with a hemoglobin level of 6.6 g/dl. The diagnosis of uterine inversion was accepted. The emergency course of action was hospitalization, and consisted of a sitz bath with permanganate solution for one week, and an iso rhesus group transfusion of two bags of blood. Parenteral antibiotic therapy consisted of ceftriaxone 2g per 24h and metronidazole 500 mg every 8h per 24h.

Exploration under anaesthesia 72 hours after admission revealed an intracavitary myoma ruptured by the interventional manoeuvre, giving a bilobed appearance, associated with stage 3 uterine inversion. Given the stage 3 uterine inversion, we decided on double-approach surgical treatment: vaginal approach first, followed by laparotomy. By vaginal approach, we proceeded to ablation of the myomatous core, and an attempt to reduce the inversion was unsuccessful. The uterus was then repositioned in the abdominal cavity, and a hysterectomy with preservation of the adnexa was performed.

Figure 2: Repositioning of the Uterus in the Abdominal Cavity after Incision

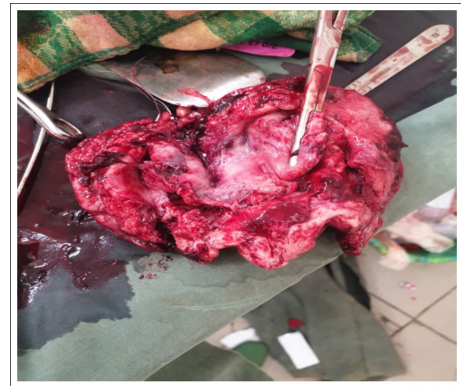

Figure 3: Hysterectomy Specimen

The postoperative course was straightforward, and the patient was discharged from hospital on day 6. Anatomopathological examination gave a histological result in favour of a submucosal leiomyoma, an inflammatory uterus, with haemorrhagic ulceration of the endometrium compatible with uterine inversion.

Discussion

Uterine inversion is an extremely rare complication. In the post-partum period, its frequency is estimated at 1/100,000 deliveries [4]. Outside the puerperal period, epidemiological data are scarce. These are sporadic cases [5]. Fifty-six cases were reported in the literature between 1976 and 2014. The majority of cases involved postmenopausal women or women over 45 years of age [6]. Four cases of uterine inversion on embryonal rhabdomyosarcoma in adolescents have been described [7]. Two conditions are necessary for the formation of uterine inversion: uterine hypotonia and cervical dilatation sufficient. Several factors are implicated in the pathophysiology of non-puerperal uterine inversion: the presence of a uterine tumour located preferentially on the uterine fundus; on a thin uterine wall; with a small tumour pedicle; rapid tumour growth; and cervical dilatation by distension of the uterine cavity. The etiology found in 70 to 85% of cases, depending on the author, is submucosal myoma [6]. In 15 to 30% of cases, malignant tumors are involved, with uterine sarcomas (leiomyosarcoma, embryonal rhabdomyosarcoma, endometrial stromal sarcoma) at the Forefront. There are two types of uterine inversion: puerperal and non-puerperal or gynecological.

Depending on Severity, Four Degrees of Inversion are Distinguished [5].

First Degree: The uterine fundus is depressed into a “cul de fiole” or cup

Second Degree: The inverted uterus passes through the external orifice of the cervix

Third Degree: The uterine body becomes intra-vaginal and may completely exteriorize

Fourth Degree or total Inversion: The vaginal walls participate in the inversion.

Several approaches have been described in the literature: conservative treatment when reduction of uterine inversion is possible, mainly in cases of 1st or 2nd degree uterine inversion.

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 [6-10].

Our patient presented with a 3rd degree inversion. The most frequent etiology in (70-85%) of cases is uterine myoma and submucosal myoma was the case of our patient which is of the leiomyoma type [5-8]. Kesrouani also found a multiparous with leiomyoma in the occurrence of inversion, just as in our case it was a multiparous with leiomyoma [9,10]. Chronic uterine inversion can be responsible for serious complications, namely uterine infection and chronic uterine ischemia with infarction and tissue necrosis [11]. In the case of our patient, we note this infectious complication with tissue necrosis. Treatment is surgical, conservative or radical. Non-surgical treatment has no place in chronic women. In this case, hysterectomy can be performed vaginally, exposing the surgeon to technical difficulties due to changes in the usual anatomical landmarks, particularly with regard to the urinary excretory tracts (ureters and bladder). The abdominal route has also been described, but requires reduction of the inversion, with restitution of the uterus in the pelvic cavity. In the literature, uterine artery embolization is indicated in chronic non-puerperal uterine inversions, generally of the 2nd and 3rd degree, and in acute puerperal inversions reducible to conservative treatment [11]. Surgical technique: we performed a posterior median hysterotomy to avoid the bladder over 6 cm, then traction on the uterine fundus using Alice forceps, followed by repositioning of the uterus in the abdominal cavity. A hysterectomy was performed because of the significant haemorrhage associated with the inflammatory aspect of the uterine tissue, which sheared the uterus.

Conclusion

Non-puerperal uterine inversion is rare. We found a case of neglected acute uterine inversion in a multiparous patient with a myoma-carrying uterus, in whom the attempted extraction of a myoma delivered through the cervix resulted in acute uterine inversion, which was diagnosed and managed late with the onset of infectious complications. Treatment was radical surgery.

Conflicts of Int Erest: The authors declare no conflicts of interest.

Authors' Contributions: All authors contributed to this work. They have read and approved the final version of the manuscript.

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