

Pyometra Due to IUD Versus Suspected Endometrial Neoplasm in a Sexagenarian. Case Report

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Abstract

This is a 61-year-old patient who came due to an incidental finding of pyometra on ultrasound, asymptomatic, having had an IUD for over 30 years, who raised the possibility of a local infectious condition versus an endometrial adenocarcinoma and with the impossibility of performing a hysteroscopic biopsy due to atrophic stenosis of the cervix, coupled with the lack of clinical resolution with antibiotic therapy, a preventive and diagnostic total abdominal hysterectomy was performed.

Keywords: Pyometra; IUD; Endometrial Neoplasm; Sexagenarian

Introduction

Endometrial cancer is a pathology that occurs mostly after the age of 50, and for the most part can evolve asymptotically after the age of 60. The suspicious findings are presented in the presence of abnormal uterine bleeding and endometrial thickening in a chance finding or in follow-up ultrasound studies.

Also the presence of hydrometra, but especially pyometra with or without symptoms, can mask precancerous lesions of the endometrium or low-grade cancers, meriting hysteroscopic evaluation and directed biopsy. Transvaginal ultrasound and magnetic resonance imaging can broaden the evaluation of the uterine cavity, endometrial thickness, presence of benign lesions, placement of IUDs, presence of possible tumoral lesion and extension, but its real usefulness is based on its results to decide to perform an endometrial biopsy.

On the other hand, pelvic inflammatory disease in postmenopausal patients is rarely described, because cervical atrophy and hypoestrogenism constitute natural barriers that hinder bacterial migration and proliferation, unless there are epigenetic and environmental factors that allow it.

The clinical pictures of presentation of intrauterine inflammatory and infectious processes and the rest of the pelvic tissues in older patients are very varied and do not necessarily present symptoms that are easy to determine. Generally, they are very vague and nonspecific symptoms and more oriented to colonic or urogenital area problems. This causes these patients to go to the consultation or emergency room very late, finding incidental, curious and unexpected pathologies.

The inflammatory processes of the pelvic structures are mostly due to infectious processes of the vaginal and intestinal saprophytic flora, starting as cervicovaginitis and by regional contiguity, it affects the endometrial cavity and from there the rest of the internal genitals. With some exceptions, contagion via blood and lymphatic channels is also described, due to complicated deep pelvic endometriosis, diverticulosis, etc.

In postmenopausal patients, hydrometra is frequently found incidentally, without significance, its causes being processes of glandular secretion and natural cellular desquamation, which distend the uterine cavity, secondary to atrophic cervical stenosis. However, there is always the doubt as to whether it may also be the expression of an atypical neoplastic inflammatory process, especially when its volume is considerable [1]. The volumetry of a hydrometra, to consider it normal, is not of interest, while the endometrial line is [2]. It is debatable, because undoubtedly this abundant secretion can be the expression of increased metabolic activity of an atrophic endometrial stratum, which must be evaluated with hysteroscopy and directed biopsy [3].

The risk of endometrial cancer in an atrophic epithelium is very low, not higher than 3%, but the suspicion can increase with hydrometra and pyometra, leading to greater care and monitoring in these particular cases [4].

The presence of pyometra in postmenopause is very rare and the cases that have been described are mainly associated with endometritis [5], secondary endometrial bone hyperplasia, recurrent cervicovaginitis and reaction to foreign bodies such as those with intrauterine devices of different types. Many of these conditions are resolved by treating the specific cause and in which the endometrial biopsy is performed in addition. However, unexpected cases may occur that are out of the ordinary, such as the clinical situation we present.

In this sense, the interest of this case lies in the approach we took to perform a conventional total abdominal hysterectomy (due to lack of a laparoscope), in the presence of large volume pyometra that distends the uterine cavity, either due to endometritis in IUD users or endometrial neoplasia, without the possibility of performing a histopathological study by hysteroscopy, due to severe cervical atrophy.

Clinical Case Description

This is the patient, HC 101509, 61 years old, who went to the gynecological consultation on 5/06/2024, for evaluation and conduct, due to an incidental finding to the ultrasound performed by a private physician on 5/6/2024, which reports hydrometra, embedded IUD and endometrial atrophy. Her important medical history is the date of her last menstruation at the age of 49 years, gestation 7, births 4, cesarean section 1, abortions 2 and user of COPPER T IUD, for 30 years. She does not report any other pathologies or allergies. The last cervical cytology was on 5.6.2024, negative for intraepithelial lesion, atrophy.

Clinically, her vital parameters are within normal limits, cardiopulmonary without alterations, no evidence of abnormalities, in the abdomen without alterations, Atrophic vulva, short, pale, smooth vagina, with a vaginal fundus with a barely visible, flat cervix, with a punctate external cervical orifice, with no evidence of signs of colpitis. Vaginal examination is omitted.

In view of the above, antibiotic therapy with ceftriaxone (1g, single dose) and doxycycline for 7 days is indicated and an appointment in 10 days for a control ultrasound, with no evidence of reduction in pyometra, according to the institutional transvaginal pelvic ultrasound of 5/27/2024, with evidence of a small uterus measuring 57 x 50 x 25 mm, in AVF, atrophic, homogeneous myometrium, linear endometrium 4 mm thick, hypoechoic, with a uterine cavity containing an IUD stem in the uterine axis and dense-cloudy liquid content (ecomix), with a volumetry of approximately 10 cc. Hypoechoic, short and homogeneous cervix, atrophic ovaries, barely visible and free Douglas pouch. The ultrasound diagnoses were atrophic uterus, pyometra secondary to subclinical endometritis, and foreign body reaction due to embedded IUD (video 1, <https://youtube.com/shorts/mfc-4u4d4mQ?feature=share>).

Preoperative paraclinical and cardiovascular evaluation of 6.30.2024, without abnormalities.

Finally, it is decided to perform a total abdominal hysterectomy on 7.13.2024, with minilaparotomy (we do not have a laparoscope), mainly due to the impossibility of the transvaginal approach, given persistent pyometra, risk of recurrence, possibility of chronic pelvic inflammatory disease and lack of endometrial histopathological evaluation to rule out neoplastic lesions.

During the surgical procedure, a small, intrapelvic uterus with a smooth surface is described, with a bladder wall strongly adhered to the uterine isthmus, soft consistency, non-thickened parametria, no palpable adenopathies or evidence of pelvic adhesions. During the dieresis of the broad ligament and bladder divulsion, the isthmic muscle is torn, with the release of purulent fluid (Photograph 1) and part of the IUD stem is externalized (Photograph 2-4). The proper cleaning and protection of the field is performed, completing the intervention without complications, along with bilateral salpingo-oophorectomy.



Photograph 1: Outflow of greenish liquid.



Photograph 2-4: Exposure sequence of the IUD, which was under strain.

Histopathological report dated 7.30.2024, reports chronic endometritis, negative for endometrial neoplasia, rest of tissues without abnormalities, atrophy (Image 1).



Image 1

Discussion

In this simple case, we find a patient who presents incidental pyometra, secondary to an IUD that had been in place for more than 30 years, which was not removed because it did not cause discomfort and perhaps later because it was not possible to remove it normally via the transvaginal route due to severe stenosis and cervical atrophy. However, when detecting large volume pyometra, we are forced to carry out further investigation, given the risk of infection and hidden endometrial neoplasia [3,4].

It has been described that the permanence of an IUD for long periods of years can cause a risk of acute or chronic endometritis and that especially postmenopausal patients can tolerate the infection better, being subclinical and that the IUD can be covered by the endometrium or embedded within the myometrium, being tolerated without causing discomfort.

The situation made us think about what to do, if only to try medical treatment due to evidence of a subclinical chronic infection due to the lack of inflammatory symptoms and vaginal discharge. We started with broad-spectrum antibiotic therapy, as if it were a pelvic inflammatory disease and then when evaluating that the pyometra remained the same, we raised the possibility of a prophylactic hysterectomy due to the risk of extension of the local infection to other areas of the pelvis, coupled with the inability to directly evaluate the uterine cavity and take a sample of endometrial tissue.

In reality, each patient is a particular case, since generally hydro or pyometra of a volume greater than 3 cm³, in postmenopausal women produces some type of symptom [5], but this was not our case. Finally, taking such an aggressive approach of performing a hysterectomy was really due to the impossibility of accessing the uterine cavity, the persistence of pyometra, the possibility of perforation of the intramyometrial IUD, the necessary histopathological evaluation of endometrial tissue to rule out endometrial neoplasia and the fear of losing follow-up of the patient due to her residence being far from our hospital and her socioeconomic level.

Conclusion

We can conclude by pointing out that any postmenopausal patient who has pyometra of large volume, whether symptomatic or not, should be evaluated by ultrasound and hysteroscopy, in order to rule out endometrial neoplasia and infection. In our particular case, the transvaginal approach was impossible, making it necessary to perform a prophylactic hysterectomy to provide definitive diagnosis and treatment.

We would also like to take this opportunity to inform you that the laparoscopic abdominal approach would have been ideal, which we regret not to perform due to lack of equipment in our hospital and in other higher levels of care.

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