CASE REPORT JSLS

Postmenopausal Bleeding due to a Cu-7 Intrauterine Device Retained for Thirty Years

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ABSTRACT

Background: A retained intrauterine device is a rare, but easily correctable, cause of postmenopausal bleeding (PMB).

Case: A 64-year-old woman presented to her gynecologist with PMB. Sonographic evaluation of the endometrium revealed the presence of a Cu-7 IUD retained for at least 30 years. Hysteroscopically assisted retrieval of the IUD resulted in complete resolution of symptoms.

Conclusion: A retained IUD should be considered in the differential diagnosis for PMB. In addition, the authors recommend pelvic sonography as the first-line diagnostic modality for PMB to aid the diagnosis of retained IUD as well as other pathology.

Key Words: Intrauterine device, Retained IUD, Postmenopausal bleeding, Hysteroscopic removal of IUD, Ultrasound.

INTRODUCTION

Postmenopausal bleeding (PMB) is a common presenting complaint encountered by gynecologists, accounting for up to 5% of office visits.[1] The list of differential diagnoses is relatively short compared to that for dysfunctional uterine bleeding in a pre- or perimenopausal woman, because pregnancy related bleeding and abnormalities in ovulation can be reliably excluded. Common causes for PMB include atrophic endometrium, uterine polyp, leiomyomata, endometrial hyperplasia/cancer, coagulopathy, and lesions of adjacent structures (cervix, vagina, vulva or bladder).[2] While vaginal bleeding associated with a copper intrauterine device (IUD) is expected in younger women, rarely is a retained copper IUD considered as a possible cause for vaginal bleeding in postmenopausal women. This clinical case illustrates the importance of pelvic sonography in the diagnosis of a retained IUD causing PMB.

CASE REPORT

A 64-year-old gravida 1 para 0 (history of molar pregnancy) presented to her gynecologist for evaluation of postmenopausal bleeding, which she described as "period-like" and occurring for several months. Examination of the patient in the office was unremarkable. No IUD strings were visible. A pelvic ultrasound was ordered, and a foreign body within the endometrial cavity consistent with a retained Cu-7 (G. D. Searle & Co., 1974–1986) intrauterine device was identified **(Figure 1)**.

Upon identification of a retained IUD found by ultrasound, further history was obtained. The patient reported at least 4 prior IUDs placed for contraception throughout her reproductive life. She reported one placed during her late twenties and another in her early thirties. She was not specifically aware of when these IUDs were removed. Office records for placement and removal of the first 2 IUDs were unavailable due to the retirement of the clinician. Records from her next physician were obtained and indicated the placement and removal of 2 Paragard Copper T380-A IUDs (Duramed Pharmaceuticals, Inc., Pamona, NY). Interestingly, while the patient tolerated her first Paragard IUD well, the second was discontinued

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DOI: 10.4293/108680812X13427982376743

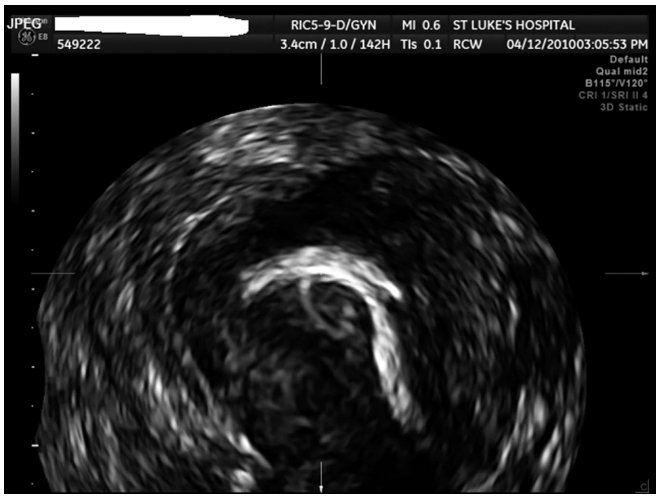

Figure 1. Transvaginal 3D ultrasound showing a retained Cu-7 IUD within the uterine cavity.

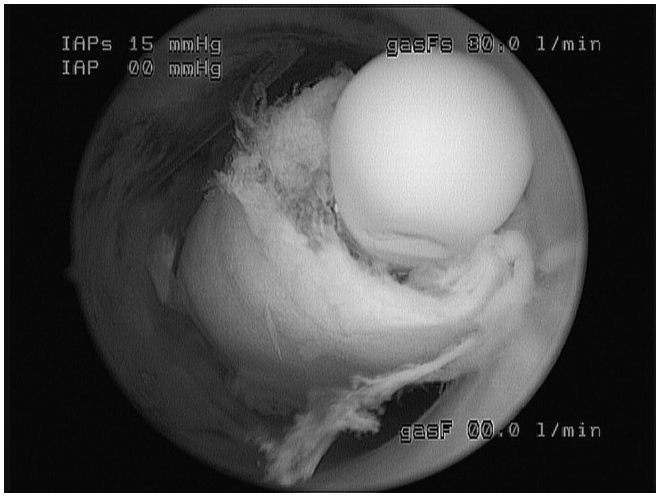

Figure 2. Hysteroscopic image of retained IUD encapsulated in fibrous material.

abruptly due to intolerable dysmenorrhea and menorrhagia.

After discussion with the patient, the decision was made that the safest method for retrieval of her retained IUD was for her to be under general anesthesia with hysteroscopic guidance to be used. Diagnostic hysteroscopy was performed with a 4-mm scope. A tight lower uterine segment with extensive adhesions was noted. This was gently dilated to allow passage of the hysteroscope into the uterine cavity. The IUD was identified within the uterine cavity and noted to be completely encapsulated within fibrous tissue **(Figure 2)**. The 6.5-mm operative hysteroscope with 2-mm operative channel was then passed into the

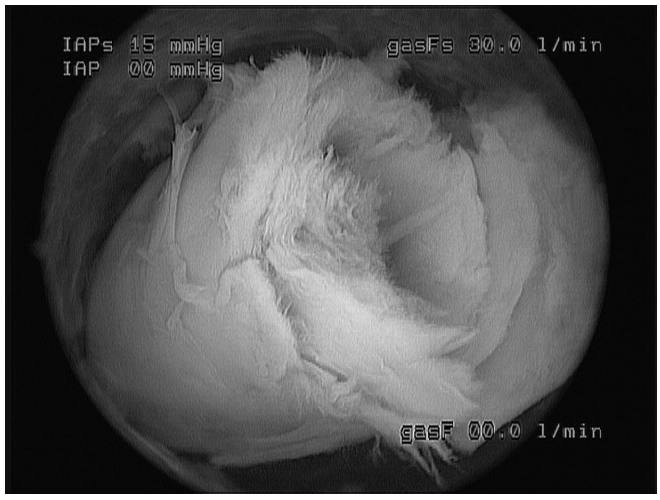

Figure 3. Hysteroscopic image of retained fibrous capsule after the removal of the retained IUD.

uterine cavity. The IUD string was identified and grasped with hysteroscopy forceps; however, the string was too fragile to withstand the amount of traction necessary for removal of the IUD. The grasping forceps were too small to gain purchase on the IUD itself, so a pituitary rongeur was used for this purpose. The capsule, however, was adherent to the uterine wall and could not be retrieved with the IUD itself **(Figure 3)**. Finally, the capsule was removed with the use of Corson Myoma Grasping Forceps (Marina Medical Instruments Inc., Sunrise, FL). Suction curettage was performed. The hysteroscope was again advanced, and a clean, clear endometrium was noted. Examination of the specimen revealed it to be an intact Cu-7 IUD **(Figure 4)**. Histologic analysis of the capsule showed mildly inflamed collagenous tissue. The endometrial curettings showed fragments of inflamed collagenous tissue as well as atrophic endometrium. Due to the long-term retention of a copper-containing IUD, a serum copper level was checked and found to be 122mcg/dL. This was well within the reference range. Since the procedure, the patient has noted resolution of her bleeding.

DISCUSSION

With the heightened suspicion for cancer in a postmenopausal patient, evaluation of PMB typically proceeds with the exclusion of malignancy by either sampling of the endometrium or sonographic visualization. Many clinicians use endometrial biopsy as their first-line modality due to low cost, ready availability, and patient acceptance. Office endometrial biopsy gained acceptance rapidly due to the publication of a trial by Stovall et al[3] in which the

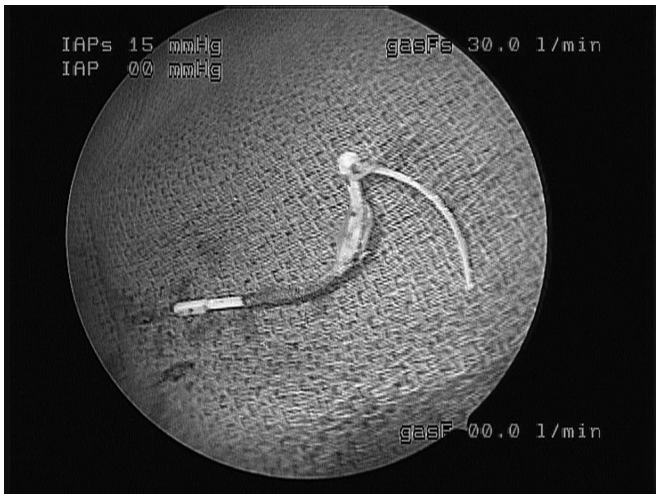

Figure 4. Image the Cu-7 IUD after removal from the uterine cavity.

device detected endometrial cancer in 39 of 40 patients known to have the disease. This corresponds to a sensitivity of 97.5%. Interestingly, subsequent studies have shown widely varying results, ranging from 67% to 92% sensitivity.[4–7]

In contrast, studies have consistently demonstrated that the identification of an endometrial stripe measuring ≤4mm on ultrasound has a negative predictive value of 99% to 100% for the presence of cancer.[7] An endometrial stripe of >5mm, however, is not necessarily indicative of the presence of malignancy. When this is encountered, the authors recommend tissue sampling by hysteroscopy with directed biopsy in conjunction with dilation and curettage based on data previously published.[8,9]

Although cancer must always be considered and reliably excluded due to its serious sequelae, malignancy afflicts <15% of patients evaluated for PMB.[10,11] The most common cause, accounting for more than 50% of cases, is atrophic endometrium.[10] If atrophic endometrium is present, endometrial biopsy retrieves enough tissue for diagnosis only 27% of the time, leaving uncertainty in the remaining 73% of cases. Use of ultrasound can help to avoid this uncertainty.[12]

Clearly, the majority of patients evaluated for PMB would benefit from a diagnostic modality that also offers the ability to identify a broad spectrum of benign pathology. Performing pelvic sonography as a first-line diagnostic study allows for the reasonable exclusion of cancer in postmenopausal women,[13,14] while at the same time offering the ability to identify common benign pathology, such as endometrial polyps, uterine leiomyomomata, and atrophic endometrium. In addition, ultrasound may help the clinician to identify more rare causes for PMB, including retained IUD (illustrated by this case report), hormone-secreting ovarian mass, and primary fallopian tube cancer.[15,16]

A thorough review of the literature demonstrates that a retained IUD as the cause for PMB is a rarity, with only 6 reported cases.[17–21] With the widely publicized failure of the Dalkon shield in the 1970s, IUD use in the United States drastically declined.[22] However, over the past several years, demand for long acting reversible contraception has caused a resurgence in IUD use, with total usage increasing from 0.8% in 1995, to 2% in 2002, and 5.5% in 2008.[23] With an increase in the number of IUDs being placed, it is reasonable to conclude that the number of lost/forgotten/retained IUDs will correspondingly increase. Thus, continued clinical vigilance is warranted.

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