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Ultrasound-guided hysteroscopic removal of forgotten, retained and fragmented intrauterine device: A case report

Ultrazvučno vođena histeroskopija i odstranjenje zaboravljenog, zaostalog i fragmentiranog unutarmaterničnog uloška: prikaz slučaja

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Summary

Objective: To present a rare case of forgotten, retained and fragmented copper intrauterine device (IUD) in a postmenopausal women. With the growing popularity of this method of contraception, we may see more rare IUD complications in clinical practice.

Case report: A 56-year-old, postmenopausal woman was referred to our department after previous unsuccessful attempts to remove the IUD in an office setting and later under general anesthesia by means of traditional methods. We successfully performed ultrasound-guided diagnostic hysteroscopy for removal of forgotten, retained and fragmented IUD.

Conclusion: Although our patient had no complications despite prolonged usage of copper IUD, the leaving device in situ is not reasonable even if it is asymptomatic; it can lead to serious and life-threatening complications. Patient education is critical and appropriate and clear instructions should be given to the patient at the time of IUD placement regarding the time of its removal in order to avoid complications of a forgotten, retained and fragmented IUD.

Key words: forgotten, retained, fragmented, intrauterine device, hysteroscopy

Sažetak

Cilj: Cilj ovoga rada je prikazati rijedak slučaj zaboravljenog, zaostalog i fragmentiranog bakrenog unutarmaterničnog uloška kod bolesnice u postmenopauzalnoj dobi. Porastom popularnosti ove kontracepcijske metode, za očekivati je i porast do sada rijetkih komplikacija vezanih uz unutarmaterniče uloške u kliničkoj praksi.

Prikaz slučaja: Prikazan je slučaj 56-godišnje žene u postmenopauzi koja je bila poslana na naš odjel nakon neuspješnog pokušaja odstranjenja unutarmaterničnog uloška u izvanbolničkoj ustanovi, te dodatnog neuspješnog pokušaja odstranjenja uloška tradicionalnim metodama u općoj anesteziji. Pomoću ultrazvučno vođene dijagnostičke histeroskopije uspješno smo odstranili zaostali, fragmentirani unutarmaternični uložak.

Zaključak: Iako se radi o dugogodišnjoj upotrebi unutarmaterničnog uloška kod asimptomatske bolesnice ostavljanje takvog uloška u maternici nije smisleno jer može dovesti do ozbiljnih, životno ugrožavajućih komplikacija. Edukacija bolesnica o upotrebi unutarmaterničnog uloška je od ključnog značaja, jasne upute o roku sigurnog kontracepcijskog djelovanja uloška prilikom insercije moraju biti predočene da bi se izbjegle komplikacije kao što je zaboravljen, zaostao i fragmentiran unutarmaternični uložak.

Ključne riječi: zaboravljen, zaostao, fragmentiran, unutarmetrinični uložak, histeroskopija

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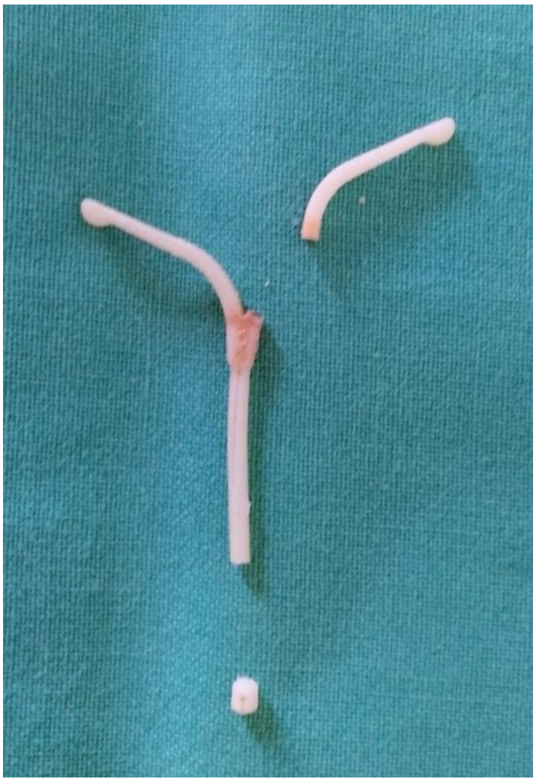
Introduction

The intrauterine device (IUD) is the most commonly used method of long-acting reversible contraception worldwide because of its high efficacy, safety, easy to use with minimal and tolerable side effects.[1] Regardless of the admirable safety profile, side effects and complications can appear at the time of insertion or at any different time following insertion.[1] Complications that can occur at the time of IUD removal include nonvisible IUD strings, difficult IUD removals, and very rarely, a fragmented IUD. These can usually be resolved with a variety of techniques in the office setting. However, in some cases hysteroscopy may be required to remove a retained, implanted, or fragmented IUD. We report a rare case of retrieval and removal of forgotten, retained and fragmented copper IUD, twenty years after its insertion.

Case Report

A 56-year-old, postmenopausal woman (gravida 3, para 2, with history of two previous cesarean deliveries), was referred to our department for the removal of a retained intrauterine device. Anamnestically, she had an IUD placed approximately 20 years earlier with earlier attempts to remove the IUD in an office setting and later under general anesthesia by means of an IUD retriever and D&C (dilation and curettage) were unsuccessful. Apparently, the failure of previous attempts could be attributed to severe cervical stenosis and/or formation of false passage. A speculum examination was performed, and the IUD strings were not observed. The intrauterine position of the inserted device was confirmed by transvaginal ultrasound prior to the procedure.

Under general anesthesia, an abdominal ultrasound-guided diagnostic hysteroscopy (Mini - Hysteroscope 3 mm, Olympus®) was performed for the removal of retained, fragmented IUD and restoration of patency of the obliterated cervical canal. A semirigid Fr 3 (The French catheter scale) grasping forceps was used to remove three pieces of the fragmented copper IUD an examination of the removed IUD with gross visual inspection showed a break in the copper wire, as well as a break in the shaft of the IUD. The rusted area of the fractured copper IUD can be seen (Picture 1).



Picture 1 Fragmented copper intrauterine device.
Slika 1. Fragmetirani bakreni intrauterini uložak.

Discussion

Intrauterine devices are a valuable option for women who desire effective, long-term yet reversible contraception, or want to avoid estrogen exposure (all IUDs) or progestin exposure (copper IUDs).[1] In addition to their effectiveness in preventing unplanned pregnancy, the benefits of IUDs are diverse, including their use for emergency contraception and treatment for menometrorrhagia and endometrial hyperplasia. While a popular and safe form of contraception, the IUD may cause complications and side effects at the time of insertion and at various time points after insertion.

Issues and complications that can occur at the time of IUD removal include nonvisible IUD strings, difficult IUD removals and fragmented IUD.[2] These can usually be managed with a variety of techniques in the office setting. IUD fragmentation is a very rare event with a small number of reports in literature.[2] In the past, the reported fragmented devices comprised several models of copper IUDs, however, there is an increasing number of device fracture associated with IUD with progestogen.[3] Most cases occurred during IUD removal when the IUD fragmented, but there were also cases reporting fragmented IUD prior to its removal.[4,5] The occurrence of copper IUD fragmentation has led researchers to question the structural integrity of new and used devices.

In a study evaluating four commonly used copper IUDs Custo et al. reported that the resistance to mechanical fatigue varied among all new as well as used IUDs; all IUDs showed an exponential decrease in resistance with time in utero and that IUD shape may influence resistance to mechanical fatigue.[6] The incidence of copper wire fracture, secondary to dissolution in utero, has also shown to increase with the increasing duration of use.[7] The copper IUDs have a licensed duration of use of 3-10 years (depending on the type), yet some clinicians use copper IUD for more than 10 years before replacing it with a new device. The usage of the TCu380A for more than 10 years is supported by a number of studies.[8,9] Nonetheless, in postmenopausal patients' IUD should be withdrawn from the uterus. A retained, forgotten IUD in postmenopausal women can confuse the diagnosis of postmenopausal bleeding and makes difficult procedures such as endometrial biopsy and ultrasonic endometrial evaluation. In addition, retained, forgotten and fragmented IUD in postmenopausal women can lead to adhesions, pain or severe infections such as pelvic inflammatory disease, tuboovarian abscess, pyometra and even septic shock.

The possibilities for removal of retained fragments include manual vacuum aspiration, D&C, an IUD hook, narrow tip forceps and hysteroscopic assisted extraction. Compared to traditional methods, hysteroscopy offers multiple advantages. Hysteroscopy enables to visualize macroscopic or focal abnormalities suggestive of potential pathology inside the uterine cavity, and to perform IUD extraction under visual control. The diagnostic hysteroscope has a smaller diameter, offering less cervical manipulation compared to operative hysteroscopy, and is therefore the favored method. Using semirigid forceps in retrieving the device under direct visualization makes the procedure safe with a minimal risk of complication. Occasionally, as in our case, ultrasound guided diagnostic hysteroscopy can be required in patients at high risk for difficult entry (in severe cases of cervical stenosis, cervical obliteration or a tortuous cervical canal).

Conclusion

Although our patient had no complications despite the prolonged usage of copper IUD, leaving the device in situ is not reasonable even if it is asymptomatic; it can lead to serious and life-threatening complications. Patient education is critical and appropriate and clear instructions should be given to the patient at the time of IUD placement regarding the time of its removal in order to avoid complications of a forgotten, retained and fractured IUD.

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