

World Journal of *Clinical Cases*

World J Clin Cases 2022 April 6; 10(10): 2976-3320



REVIEW

- 2976 Gut microbiota in gastrointestinal diseases during pregnancy
Liu ZZ, Sun JH, Wang WJ
- 2990 Targeting metabolism: A potential strategy for hematological cancer therapy
Tang X, Chen F, Xie LC, Liu SX, Mai HR

MINIREVIEWS

- 3005 Elevated intra-abdominal pressure: A review of current knowledge
Łagosz P, Sokolski M, Biegus J, Tycinska A, Zymlinski R

ORIGINAL ARTICLE**Case Control Study**

- 3014 Changes in corneal nerve morphology and function in patients with dry eyes having type 2 diabetes
Fang W, Lin ZX, Yang HQ, Zhao L, Liu DC, Pan ZQ
- 3027 Combined sevoflurane-dexmedetomidine and nerve blockade on post-surgical serum oxidative stress biomarker levels in thyroid cancer patients
Du D, Qiao Q, Guan Z, Gao YF, Wang Q

Retrospective Cohort Study

- 3035 Early warning prevention and control strategies to reduce perioperative venous thromboembolism in patients with gastrointestinal cancer
Lu Y, Chen FY, Cai L, Huang CX, Shen XF, Cai LQ, Li XT, Fu YY, Wei J
- 3047 Dose-response relationship between risk factors and incidence of COVID-19 in 325 hospitalized patients: A multicenter retrospective cohort study
Zhao SC, Yu XQ, Lai XF, Duan R, Guo DL, Zhu Q

Retrospective Study

- 3060 Preventive online and offline health management intervention in polycystic ovary syndrome
Liu R, Li M, Wang P, Yu M, Wang Z, Zhang GZ
- 3069 Evidence-based intervention on postoperative fear, compliance, and self-efficacy in elderly patients with hip fracture
Fu Y, Zhu LJ, Li DC, Yan JL, Zhang HT, Xuan YH, Meng CL, Sun YH
- 3078 Significance of dysplasia in bile duct resection margin in patients with extrahepatic cholangiocarcinoma: A retrospective analysis
Choe JW, Kim HJ, Kim JS

- 3088** Diagnostic value and safety of medical thoracoscopy for pleural effusion of different causes

Liu XT, Dong XL, Zhang Y, Fang P, Shi HY, Ming ZJ

Observational Study

- 3101** Oxaliplatin-induced neuropathy and colo-rectal cancer patient's quality of life: Practical lessons from a prospective cross-sectional, real-world study

Prutianu I, Alexa-Stratulat T, Cristea EO, Nicolau A, Moisuc DC, Covrig AA, Ivanov K, Croitoru AE, Miron MI, Dinu MI, Ivanov AV, Marinca MV, Radu I, Gafton B

- 3113** Breast-conserving surgery and sentinel lymph node biopsy for breast cancer and their correlation with the expression of polyligand proteoglycan-1

Li FM, Xu DY, Xu Q, Yuan Y

SYSTEMATIC REVIEWS

- 3121** Clinical significance of aberrant left hepatic artery during gastrectomy: A systematic review

Tao W, Peng D, Cheng YX, Zhang W

META-ANALYSIS

- 3131** Betel quid chewing and oral potential malignant disorders and the impact of smoking and drinking: A meta-analysis

Lin HJ, Wang XL, Tian MY, Li XL, Tan HZ

- 3143** Effects of physical exercise on the quality-of-life of patients with haematological malignancies and thrombocytopenia: A systematic review and meta-analysis

Yang YP, Pan SJ, Qiu SL, Tung TH

CASE REPORT

- 3156** Primary malignant peritoneal mesothelioma mimicking tuberculous peritonitis: A case report

Lin LC, Kuan WY, Shiu BH, Wang YT, Chao WR, Wang CC

- 3164** Endoscopic submucosal dissection combined with adjuvant chemotherapy for early-stage neuroendocrine carcinoma of the esophagus: A case report

Tang N, Feng Z

- 3170** Lymph-node-first presentation of Kawasaki disease in a 12-year-old girl with cervical lymphadenitis caused by *Mycoplasma pneumoniae*: A case report

Kim N, Choi YJ, Na JY, Oh JW

- 3178** Tuberculosis-associated hemophagocytic lymphohistiocytosis misdiagnosed as systemic lupus erythematosus: A case report

Chen WT, Liu ZC, Li MS, Zhou Y, Liang SJ, Yang Y

- 3188** Migration of a Hem-o-Lok clip to the renal pelvis after laparoscopic partial nephrectomy: A case report

Sun J, Zhao LW, Wang XL, Huang JG, Fan Y

- 3194** Ectopic intrauterine device in the bladder causing cystolithiasis: A case report
Yu HT, Chen Y, Xie YP, Gan TB, Gou X
- 3200** Giant tumor resection under ultrasound-guided nerve block in a patient with severe asthma: A case report
Liu Q, Zhong Q, Zhou NN, Ye L
- 3206** Myomatous erythrocytosis syndrome: A case report
Shu XY, Chen N, Chen BY, Yang HX, Bi H
- 3213** Middle thyroid vein tumor thrombus in metastatic papillary thyroid microcarcinoma: A case report and review of literature
Gui Y, Wang JY, Wei XD
- 3222** Severe pneumonia and acute myocardial infarction complicated with pericarditis after percutaneous coronary intervention: A case report
Liu WC, Li SB, Zhang CF, Cui XH
- 3232** IgA nephropathy treatment with traditional Chinese medicine: A case report
Zhang YY, Chen YL, Yi L, Gao K
- 3241** Appendico-vesicocolonic fistula: A case report and review of literature
Yan H, Wu YC, Wang X, Liu YC, Zuo S, Wang PY
- 3251** *Scedosporium apiospermum* infection of the lumbar vertebrae: A case report
Shi XW, Li ST, Lou JP, Xu B, Wang J, Wang X, Liu H, Li SK, Zhen P, Zhang T
- 3261** Woman diagnosed with obsessive-compulsive disorder became delusional after childbirth: A case report
Lin SS, Gao JF
- 3268** Emphysematous pyelonephritis: Six case reports and review of literature
Ma LP, Zhou N, Fu Y, Liu Y, Wang C, Zhao B
- 3278** Atypical infantile-onset Pompe disease with good prognosis from mainland China: A case report
Zhang Y, Zhang C, Shu JB, Zhang F
- 3284** *Mycobacterium tuberculosis* bacteremia in a human immunodeficiency virus-negative patient with liver cirrhosis: A case report
Lin ZZ, Chen D, Liu S, Yu JH, Liu SR, Zhu ML
- 3291** Cervical aortic arch with aneurysm formation and an anomalous right subclavian artery and left vertebral artery: A case report
Wu YK, Mao Q, Zhou MT, Liu N, Yu X, Peng JC, Tao YY, Gong XQ, Yang L, Zhang XM
- 3297** Dedifferentiated chondrosarcoma of the middle finger arising from a solitary enchondroma: A case report
Yonezawa H, Yamamoto N, Hayashi K, Takeuchi A, Miwa S, Igarashi K, Morinaga S, Asano Y, Saito S, Tome Y, Ikeda H, Nojima T, Tsuchiya H

- 3306** Endoscopic-catheter-directed infusion of diluted (-)-noradrenaline for atypical hemobilia caused by liver abscess: A case report
Zou H, Wen Y, Pang Y, Zhang H, Zhang L, Tang LJ, Wu H
- 3313** *Pneumocystis jiroveci* pneumonia after total hip arthroplasty in a dermatomyositis patient: A case report
Hong M, Zhang ZY, Sun XW, Wang WG, Zhang QD, Guo WS

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Hui-Jeong Hwang, MD, PhD, Associate Professor, Department of Cardiology, Kyung Hee University Hospital at Gangdong, Kyung Hee University College of Medicine, Seoul 05278, South Korea. neonic7749@hanmail.net

AIMS AND SCOPE

The primary aim of *World Journal of Clinical Cases* (*WJCC*, *World J Clin Cases*) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

INDEXING/ABSTRACTING

The *WJCC* is now indexed in Science Citation Index Expanded (also known as SciSearch®), Journal Citation Reports/Science Edition, Scopus, PubMed, and PubMed Central. The 2021 Edition of Journal Citation Reports® cites the 2020 impact factor (IF) for *WJCC* as 1.337; IF without journal self cites: 1.301; 5-year IF: 1.742; Journal Citation Indicator: 0.33; Ranking: 119 among 169 journals in medicine, general and internal; and Quartile category: Q3. The *WJCC*'s CiteScore for 2020 is 0.8 and Scopus CiteScore rank 2020: General Medicine is 493/793.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: *Xu Guo*; Production Department Director: *Xiang Li*; Editorial Office Director: *Jin-Lei Wang*.

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Thrice Monthly

EDITORS-IN-CHIEF

Bao-Gan Peng, Jerzy Tadeusz Chudek, George Kontogeorgos, Maurizio Serati, Ja Hyeon Ku

EDITORIAL BOARD MEMBERS

<https://www.wjgnet.com/2307-8960/editorialboard.htm>

PUBLICATION DATE

April 6, 2022

COPYRIGHT

© 2022 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

<https://www.wjgnet.com/bpg/gerinfo/204>

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjgnet.com/bpg/GerInfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

<https://www.wjgnet.com/bpg/gerinfo/240>

PUBLICATION ETHICS

<https://www.wjgnet.com/bpg/GerInfo/288>

PUBLICATION MISCONDUCT

<https://www.wjgnet.com/bpg/gerinfo/208>

ARTICLE PROCESSING CHARGE

<https://www.wjgnet.com/bpg/gerinfo/242>

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjgnet.com/bpg/GerInfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>

Ectopic intrauterine device in the bladder causing cystolithiasis: A case report

Hai-Tao Yu, Yong Chen, Yong-Peng Xie, Ting-Bin Gan, Xin Gou

Specialty type: Urology and nephrology

Provenance and peer review: Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0
Grade B (Very good): B
Grade C (Good): C
Grade D (Fair): 0
Grade E (Poor): 0

P-Reviewer: Ismail MAA, Qin DR

Received: August 28, 2021

Peer-review started: August 28, 2021

First decision: November 17, 2021

Revised: November 22, 2021

Accepted: February 22, 2022

Article in press: February 22, 2022

Published online: April 6, 2022



Hai-Tao Yu, Yong Chen, Yong-Peng Xie, Ting-Bin Gan, Xin Gou, Department of Urology, The First Affiliated Hospital of Chongqing Medical University, Chongqing 400010, China

Corresponding author: Xin Gou, Doctor, Chief Doctor, Department of Urology, The First Affiliated Hospital of Chongqing Medical University, No. 1 Youyi Road, Yuan Jiagang, Yuzhong District, Chongqing 400010, China. gouxincq@163.com

Abstract

BACKGROUND

An intrauterine device (IUD) is a commonly used contraceptive among women in China. It is widely used because it is safe, effective, simple, economic, and reversible. Among the possible complications, an ectopic IUD in the bladder is rare. It occurs insidiously, has a long course, is associated with a high risk for injury, and is difficult to treat.

CASE SUMMARY

A 44-year-old woman was admitted for repeated episodes of urinary frequency, urgency, and dysuria over three months. Laboratory tests revealed significantly elevated urine leukocytes and bacteria. Urine culture suggested colonization with *Enterococcus faecalis*. Abdominal computed tomography images suggested an abnormally positioned IUD that was protruding into the bladder. Cystoscopy revealed a metallic foreign body with multiple stones on its surface in the left posterior bladder wall. The foreign body measured approximately 1 cm. Hysteroscopy revealed the arm of a V-type metal IUD embedded in the middle and upper sections of the anterior wall of the cervical canal. The majority of the IUD was located in the uterine cavity. Cystoscopy was performed, and a holmium laser was utilized to break the stones attached to the portion of the IUD in the bladder. The IUD was then removed through hysteroscopy.

CONCLUSION

Ectopic IUDs in the bladder can be diagnosed with thorough imaging and safely removed through cystoscopy or hysteroscopy.

Key Words: Migrated intrauterine device; Cystoscopy; Hysteroscopy; Bladder stones; Urinary tract infection; Case report

©The Author(s) 2022. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: The intrauterine device (IUD) is a commonly used method of birth control, and its displacement into the bladder is very rare. A patient was diagnosed with an ectopic IUD in the bladder after undergoing clinical and radiologic examinations. When patients of childbearing age present with recurrent hematuria, urinary tract infections, and have a history of IUD insertion, an ectopic IUD should be considered.

Citation: Yu HT, Chen Y, Xie YP, Gan TB, Gou X. Ectopic intrauterine device in the bladder causing cystolithiasis: A case report. *World J Clin Cases* 2022; 10(10): 3194-3199

URL: <https://www.wjgnet.com/2307-8960/full/v10/i10/3194.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v10.i10.3194>

INTRODUCTION

According to the 1998 annual report of the World Health Organization, intrauterine devices (IUDs) are a cost-effective, reversible contraceptive method. They are commonly used worldwide and are the main contraceptive method among Chinese women[1]. According to statistics, the incidence of IUD displacement is approximately 0.1%-0.3%[2]. The spontaneous displacement of an IUD into the perituterine area may cause serious complications, such as vesicouterine fistulas, intestinal perforation, hydronephrosis, and even renal failure[3-7]. Intravesical translocation of an IUD is rare and may present as suprapubic pain or discomfort, dysuria, recurrent urinary tract infections, or stone formation. Removal through endoscopy or open surgery is currently recommended as the best treatment option. Herein, we report a case of a patient who presented with recurrent urinary tract infections and was incidentally found to have an IUD partially positioned in the bladder through computed tomography (CT).

CASE PRESENTATION

Chief complaints

The primary complaints included urinary frequency, urgency, and pain over a period of three months.

History of present illness

A 44-year-old woman was hospitalized in our department for a 3-mo history of urinary frequency, urgency, and pain. She denied fever, lumbago, back pain, and hematuria.

History of past illness

The patient had no contributory medical history, except for an IUD implantation seven years prior.

Personal and family history

The patient had no pertinent family history.

Physical examination

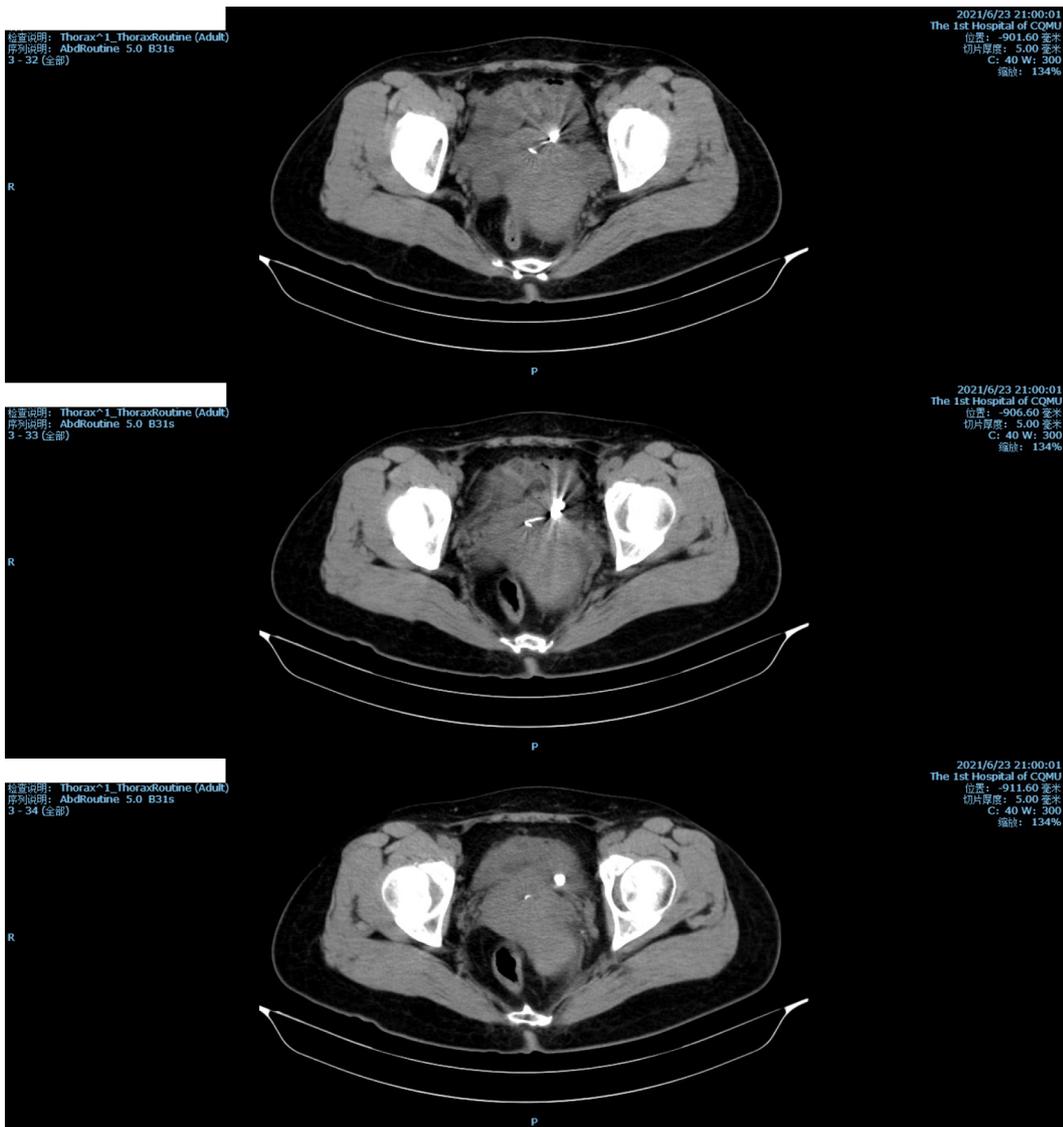
No obvious signs were found on physical examination. The patient did not demonstrate any pain on percussion of the bilateral renal areas or obvious tenderness along the path of the ureters. The patient exhibited normal external genitalia.

Laboratory examinations

A routine urinary examination was performed when the patient first developed symptoms. The examination results were as follows: 844 red blood cells/uL, 1063 white blood cells/uL, and 1873 bacteria/uL. She was treated with antibiotics; however, after 3 mo, another routine urine analysis demonstrated 131 red blood cells/uL, 330 white blood cells/uL, and 432 bacteria/uL. After she was hospitalized, her urine test showed 3 red blood cells/uL, 25 white blood cells/uL, and 5 bacteria/uL. A urine culture demonstrated colonization with *Enterococcus faecalis*.

Imaging examinations

The patient had recurring symptoms of urinary tract infection. Combined with her history of IUD implantation, we considered IUD displacement. CT revealed an abnormally positioned IUD, which had penetrated the uterine wall and was protruding forward into the bladder (Figure 1). Cystoscopic and hysteroscopic exploration was subsequently scheduled. Cystoscopy was performed with a 22-Fr cystoscope with a 70° lens. Cystoscopy demonstrated an IUD, which had penetrated the left posterior



DOI: 10.12998/wjcc.v10.i10.3194 Copyright ©The Author(s) 2022.

Figure 1 Preoperative computed tomography images. Preoperative computed tomography demonstrates an intrauterine device protruding forward through the uterus and into the bladder.

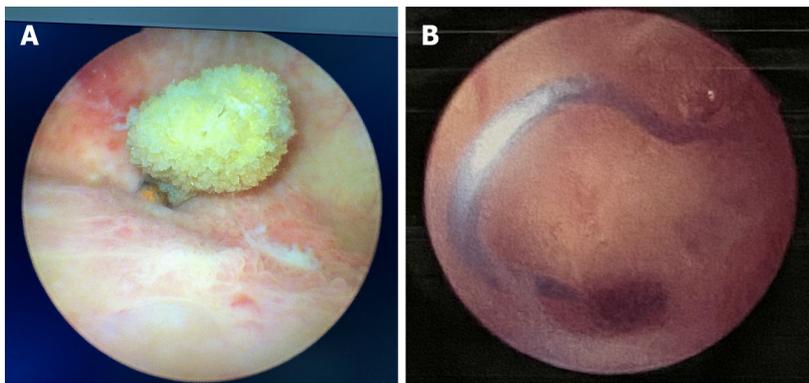
bladder wall. Approximately 1 cm of the IUD was located in the bladder cavity, and a large number of stones were visible on its surface (Figure 2A). Subsequently, hysteroscopy demonstrated a V-shaped IUD in the middle section of the cervical canal. One of the arms of the IUD was notably incarcerated in the muscular layer of the canal (Figure 2B).

FINAL DIAGNOSIS

Considering the patient’s history and laboratory and imaging findings, the patient was diagnosed with an ectopic IUD.

TREATMENT

We administered cefoxitin (2 g intravenously every 8 h) based on the patient’s urine culture results and drug sensitivity test. CT, cystoscopy, and hysteroscopy demonstrated that majority of the IUD was located in the uterine cavity; however, the portion of the IUD in the bladder was complicated due to multiple stones. Thus, we decided to use a holmium laser (Lumenis, Holmium 1.0 J × 20 Hz) to break the stones during cystoscopy and removed the ectopic IUD from the uterine cavity with the hysteroscope (Figure 3). We reassessed the bladder and uterus at the end of the procedure and confirmed that



DOI: 10.12998/wjcc.v10.i10.3194 Copyright ©The Author(s) 2022.

Figure 2 Cystoscopy and hysteroscopic images of an ectopic intrauterine device. A: Cystoscopy reveals an intravesical device with many attached stones embedded in the bladder wall; B: Hysteroscopy demonstrates a V-type intrauterine device embedded in the myometrium of the anterior wall of the cervical canal.



DOI: 10.12998/wjcc.v10.i10.3194 Copyright ©The Author(s) 2022.

Figure 3 Intrauterine device. Photograph of the intrauterine device after removal from uterus.

there was no obvious bleeding or fistula.

OUTCOME AND FOLLOW-UP

The patient had no obvious hematuria or vaginal bleeding after surgery. The urinary catheter was removed after one week, and the patient's lower urinary tract symptoms showed complete resolution. A routine urine examination was performed after three months and demonstrated no obvious abnormalities.

DISCUSSION

As reported in the literature, IUDs are most commonly displaced into the omentum (26.7%), uterorectal depression (21.5%), colorectal cavity (10.4%), myometrium (7.4%), broad ligament (6.7%), or abdominal cavity (5.2%)[8]. The translocation of an IUD through uterine perforation and into the bladder wall is rare, with an incidence of approximately 0.05–1.3/1000[9]. Kart *et al*[10] reported 200 cases of ectopic IUDs, 90 of which were located in the bladder. Goldbach *et al*[11] reported a higher incidence of ectopic Multiload Cu375 (MCu) II functional IUDs compared to other IUDs. Sun *et al*[12] suggested that the MCu II IUD was similar to the V-type IUD as both have sharp side walls that easily distort when the

device is handled or inserted incorrectly. The mechanism of IUD displacement is unclear but may be related to breastfeeding, the proximity of IUD implantation to recent delivery (up to 36 wk), surgeon's experience and skill in implanting IUDs, or a history of cesarean section[13]. Esposito *et al*[14] proposed two mechanisms for IUD displacement, which included immediate perforation during insertion and a secondary process of gradual erosion.

Clinically, bladder injury caused by an IUD may present with dysuria, hematuria, and lower abdominal pain[15]. Most patients with IUDs have a medical history of urinary tract infections or hematuria for which they have received treatment. As reported, urinary tract infections are the most common manifestation of bladder perforation with an IUD. For patients with a history of IUD implantation, recurrent urinary tract infections or intermittent hematuria should increase the suspicion for an ectopic IUD. The diagnosis of an ectopic IUD in the bladder mainly depends on imaging examinations. B-mode ultrasonography can be utilized for screening, but a definitive diagnosis requires a CT, cystoscopy, or hysteroscopy. There is currently no standard surgical treatment for this condition. Displaced IUDs can be optimally managed through hysteroscopy, cystoscopy, laparoscopy, or a combination of these procedures, with the location of the ectopic IUD determining the treatment option [13,16-18]. A recent study proposed an innovative combination of carbon dioxide cystoscopy and laparoscopy for IUD removal with a partial cystectomy[17].

A review of the current literature indicated that patients with bladder stones caused by ectopic IUDs should undergo preoperative cystoscopy, hysteroscopy (or transvaginal ultrasound), and CT imaging to determine the location of the IUD and facilitate surgical planning[19]. In the present case, the V-type IUD was only displaced approximately 1 cm into the bladder. Cystolithiasis occurred in this short segment, but the majority of the IUD was still located in the uterine cavity. We elected to use a holmium laser to break the calculi on the portion of the IUD in the bladder, and then removed the IUD through the vagina.

CONCLUSION

In conclusion, we reported a case of an ectopic IUD in the bladder that was documented seven years after IUD insertion. Among women of childbearing age with a history of IUD placement, repeated lower urinary tract symptoms, and hematuria, an ectopic IUD in the bladder should be considered. Ultrasound or CT can be used to confirm the diagnosis. Cystoscopy and hysteroscopy should be performed to guide surgical treatment. Removal of the ectopic IUD through the urethra or vagina is the least traumatic course.

ACKNOWLEDGEMENTS

We acknowledge the patient for her cooperation and trust in our treatment.

FOOTNOTES

Author contributions: Gou X designed this study; Yu HT, Chen Y, Xie YP, and Gan TB collected the information; Yu HT wrote the paper; and all authors issued final version of the paper.

Informed consent statement: Informed written consent was obtained from the patient for publication of this report and any accompanying images.

Conflict-of-interest statement: The authors declare that they have no conflict of interest.

CARE Checklist (2016) statement: The authors have read the CARE Checklist (2016), and the manuscript was prepared and revised according to the CARE Checklist (2016).

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>

Country/Territory of origin: China

ORCID number: Hai-Tao Yu 0000-0002-9745-8418; Yong Chen 0000-0002-2659-8499; Yong-Peng Xie 0000-0002-7165-9991; Ting-Bin Gan 0000-0002-2542-1720; Xin Gou 0000-0003-3062-209X.

S-Editor: Wang JL

L-Editor: A

P-Editor: Wang JL

REFERENCES

- 1 **Cheung ML**, Rezai S, Jackman JM, Patel ND, Bernaba BZ, Hakimian O, Nuritdinova D, Turley CL, Mercado R, Takeshige T, Reddy SM, Fuller PN, Henderson CE. Retained Intrauterine Device (IUD): Triple Case Report and Review of the Literature. *Case Rep Obstet Gynecol* 2018; **2018**: 9362962 [PMID: 30627466 DOI: 10.1155/2018/9362962]
- 2 **Nouioui MA**, Taktak T, Mokadem S, Mediouni H, Khiari R, Ghozzi S. A Mislocated Intrauterine Device Migrating to the Urinary Bladder: An Uncommon Complication Leading to Stone Formation. *Case Rep Urol* 2020; **2020**: 2091915 [PMID: 32318307 DOI: 10.1155/2020/2091915]
- 3 **El-Hefnawy AS**, El-Nahas AR, Osman Y, Bazeed MA. Urinary complications of migrated intrauterine contraceptive device. *Int Urogynecol J Pelvic Floor Dysfunct* 2008; **19**: 241-245 [PMID: 17632680 DOI: 10.1007/s00192-007-0413-x]
- 4 **Karsmakers R**, Weis-Potters AE, Buijs G, Joustra EB. Chronic kidney disease after vesico-vaginal stone formation around a migrated intrauterine device. *BMJ Case Rep* 2010; **2010** [PMID: 22767627 DOI: 10.1136/bcr.12.2009.2547]
- 5 **Madden A**, Aslam A, Nusrat NB. A Case of Migrating "Saf-T-Coil" Presenting With a Vesicovaginal Fistula and Vesicovaginal Calculus. *Urol Case Rep* 2016; **7**: 17-19 [PMID: 27335782 DOI: 10.1016/j.eucr.2016.03.014]
- 6 **Wang L**, Li Y, Zhao XP, Zhang WH, Bai W, He YG. Hydronephrosis caused by intrauterine contraceptive device migration: three case reports with literature review. *Clin Exp Obstet Gynecol* 2017; **44**: 301-304 [PMID: 29746046]
- 7 **Toumi O**, Ammar H, Ghdira A, Chhaidar A, Trimech W, Gupta R, Salem R, Saad J, Korbi I, Nasr M, Noomen F, Golli M, Zouari K. Pelvic abscess complicating sigmoid colon perforation by migrating intrauterine device: A case report and review of the literature. *Int J Surg Case Rep* 2018; **42**: 60-63 [PMID: 29223010 DOI: 10.1016/j.ijscr.2017.10.038]
- 8 **Gill RS**, Mok D, Hudson M, Shi X, Birch DW, Karmali S. Laparoscopic removal of an intra-abdominal intrauterine device: case and systematic review. *Contraception* 2012; **85**: 15-18 [PMID: 22067801 DOI: 10.1016/j.contraception.2011.04.015]
- 9 **Heinberg EM**, McCoy TW, Pasic R. The perforated intrauterine device: endoscopic retrieval. *JSLs* 2008; **12**: 97-100 [PMID: 18402749]
- 10 **Kart M**, Güleçen T, Üstüner M, Çiftçi S, Yavuz U, Özkürkçügil C. Intravesical Migration of Missed Intrauterine Device Associated with Stone Formation: A Case Report and Review of the Literature. *Case Rep Urol* 2015; **2015**: 581697 [PMID: 26246932 DOI: 10.1155/2015/581697]
- 11 **Goldbach AR**, Hava S, Patel H, Khan M. IUD embedment in the fallopian tube: An unexpected location for a translocated IUD. *Radiol Case Rep* 2018; **13**: 788-792 [PMID: 30002782 DOI: 10.1016/j.radcr.2018.04.030]
- 12 **Sun X**, Xue M, Deng X, Lin Y, Tan Y, Wei X. Clinical characteristic and intraoperative findings of uterine perforation patients in using of intrauterine devices (IUDs). *Gynecol Surg* 2018; **15**: 3 [PMID: 29386988 DOI: 10.1186/s10397-017-1032-2]
- 13 **Uçar MG**, Şanlıkan F, İlhan TT, Göçmen A, Çelik Ç. Management of intra-abdominally translocated contraceptive devices, is surgery the only way to treat this problem? *J Obstet Gynaecol* 2017; **37**: 480-486 [PMID: 28421909 DOI: 10.1080/01443615.2016.1268577]
- 14 **Esposito JM**, Zarou DM, Zarou GS. A Dalkon Shield imbedded in a myoma: case report of an unusual displacement of an intrauterine contraceptive device. *Am J Obstet Gynecol* 1973; **117**: 578-581 [PMID: 4743363 DOI: 10.1016/0002-9378(73)90128-2]
- 15 **Tosun M**, Celik H, Yavuz E, Cetinkaya MB. Intravesical migration of an intrauterine device detected in a pregnant woman. *Can Urol Assoc J* 2010; **4**: E141-E143 [PMID: 20944794 DOI: 10.5489/cuaj.938]
- 16 **Liu L**, Liu H, Zhang X. Intravesical migration of a Chinese intrauterine device and secondary stone formation: diagnostic investigation and laparoscopic management. *Int Urogynecol J* 2015; **26**: 1715-1716 [PMID: 25982785 DOI: 10.1007/s00192-015-2735-4]
- 17 **Jin C**, Fan Y, Zhang Q, Wang Y, Wu S, Jin J. Removal of foreign bodies embedded in the urinary bladder wall by a combination of laparoscopy and carbon dioxide cystoscopic assistance: Case report and literature review. *Investig Clin Urol* 2016; **57**: 449-452 [PMID: 27847920 DOI: 10.4111/icu.2016.57.6.449]
- 18 **Niu H**, Zhang L, Yao S, Qu Q. Successful removal of an intrauterine device perforating the uterus and the bladder with the aid of a transurethral nephroscope. *Int Urogynecol J* 2019; **30**: 325-326 [PMID: 30128747 DOI: 10.1007/s00192-018-3746-8]
- 19 **Heinemann K**, Reed S, Moehner S, Minh TD. Risk of uterine perforation with levonorgestrel-releasing and copper intrauterine devices in the European Active Surveillance Study on Intrauterine Devices. *Contraception* 2015; **91**: 274-279 [PMID: 25601352 DOI: 10.1016/j.contraception.2015.01.007]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-3991568
E-mail: bpgoffice@wjgnet.com
Help Desk: <https://www.f6publishing.com/helpdesk>
<https://www.wjgnet.com>

