



Forgotten Migrated IUD: A Rare Cause for Vesical Calculus

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Abstract

Intrauterine device (IUD) is one of the widely used contraception method worldwide but it may be associated with perforation of uterus or migration into adjacent structures. Complete intravesical migration of IUD is very rare complication with high chances of stone formation. We report a case of 30 years female presented to us as lower urinary tract symptoms with history of IUD insertion 10 years back. On evaluation she had complete intravesical migration of IUD with large stone formation around which was successfully treated by cystoscopically. One must have suspicion of migration of IUD when adult female present with LUTS with history of IUD in past.

Keywords: IUD, Vesicle calculus, Migration, Cystoscopy.

Introduction

Intra Uterine Contraceptive device (IUD) is most widely used method of reversible contraception because of its high efficacy, cost effectiveness and low complication rate, used on over 100 million women^(1,2). Intra vesical migration of IUD is very rare complication with a high rate of calculus formation⁽³⁾

We are reporting a rare case of female presenting with persistent Lower Urinary Tract Symptoms (LUTS) secondary to intravesical migration of IUD and secondary stone formation successfully managed by endoscopic method.

Case History

30 Year female presented with dysuria and frequency for 1 year. She had history of full term

normal vaginal delivery 10 years back followed by IUD insertion, with no follow up thereafter. Physical examination was unremarkable. There is no visible thread of IUD on per vaginal examination. Her biochemical investigations were normal except urine routine microscopy showing 4-5 pus cells. USG revealed 36mm vesicle calculus with thickened bladder wall. X Ray KUB showed large radio opaque shadow in pelvic region with foreign body within (Fig-1). Plain Computed tomography (CT) scan was suggestive of 3.2 x 1.8 Cm vesical calculus (Fig-2).

After pre-operative evaluation she was planned for endoscopic stone fragmentation and removal. Cystoscopy showed presence of approx. 3 x 2 cm round hard single stone around foreign body in urinary bladder with no visible vesico uterine

fistula. Vesical calculus around foreign body (fig-3) fragmented and all fragments removed. There was presence of IUD (Fig 4) inside the stone which was removed cystoscopically.

Post-operative course was uneventful and patient was discharged on 3rd post op day with removal of Foley's catheter.

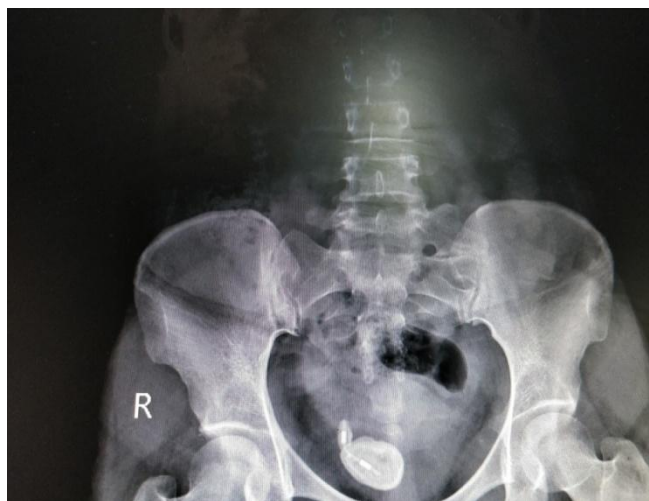


Figure 1- Showing ROD in pelvis region with Foreign body (IUD) inside.



Figure-2 Non contrast computerised tomography showing vesicalcalculus .

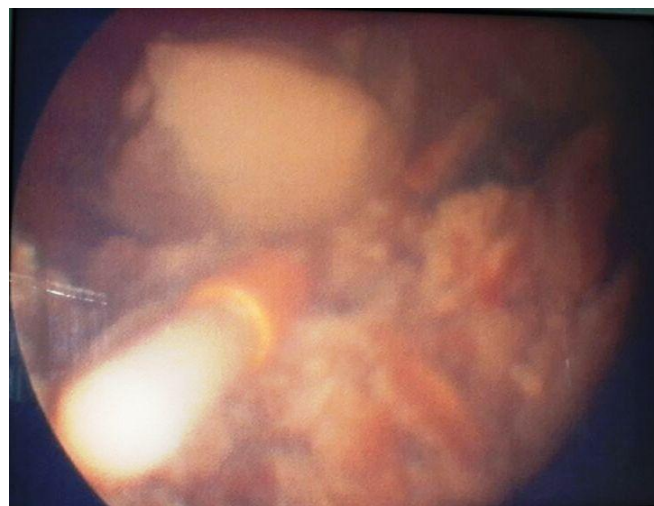


Figure-3.Fragmented stone around IUD on cystoscopy

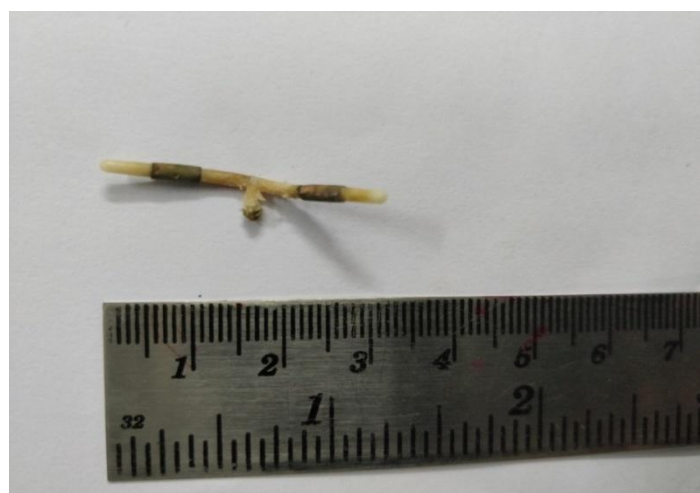


Figure-4 IUD (Copper T) after cystoscopic removal.

Discussion

As IUD are most widely used reversible contraceptive device, various complications have accompanied the use of IUD. Currently there are about 200 cases of uterine perforations reported (in literature review in 1999), a total of 165 cases were collected by Kassab and Audra in literature⁽⁴⁾. In 90 of these cases IUD migration to bladder with or without stone formation.⁽¹⁾ Albeit rare, spontaneous migration of IUD has been tried to be explained by several mechanisms such as iatrogenic perforation of uterus, spontaneous uterine or involuntary bladder contractions, intestinal peristalsis, and peritoneal fluid motion^(5,6) Among the factors that increase the risk of uterine perforation are IUD application by

inexperience medical practitioners , uterine wall fragility related to multiparity , uterine atrophy, hypoestrogenemia during postpartum and lactation periods, adhesions due to previous operations, vaginal tissue damage created by speculum, history of a recent abortion, and congenital uterine anomalies, and genital infections such as Actinomyces⁽⁵⁾

Although uterine perforation usually occurs at the time of insertion, migration to the bladder and development of symptoms are slow processes⁽⁷⁾. Time interval between insertion of IUD and symptoms varies from 6 months to 16 years⁽⁸⁾, as in our case, patient presented to us after 10 years with LUTS.

There is consensus that all extra uterine devices should be removed, as copper causes copper laden devices result in inflammation and adhesions. The WHO and International Planned Parenthood Federation suggest the removal of any extra uterine dislocated IUD regardless of its type and location⁽⁶⁾

In adult women presenting with LUTS having history of IUD in past, one must suspect migration of IUD with or without stone formation.

Treatment options for IUDs that that migrate into the bladder vary. It should be removed either endoscopically or by open method⁽⁹⁾. When it is associated with formation of big stones or with partial penetration of the bladder wall⁽¹⁰⁾, open removal is preferred.

However, open surgery entails increased patient morbidity. Therefore, treatment options for displaced IUDs must be chosen carefully. To avoid morbidity of open surgery, minimal invasive method (cystoscopic removal) should be preferred in complete intravesical migration of IUD with or without stone formation as we have done in our case.

Conclusion

Lower urinary tract symptoms in adult female with history of IUD should alert sign for migration of IUD.

Every woman should be informed before IUD insertion procedure, regarding its removal and its serious complications and need of periodic follow up

Endoscopic retrieval of migrated IUD intravesically with or without stone should be treatment of choice whenever its feasible.

References

1. W. D. Mosher and W. F. Pratt, "Contraceptive use in the United States, 1973–1988," Patient Education and Counseling, vol. 16,no.2, pp. 163–172, 1990.
2. Y. A. Tuncay, E. Tuncay, K. Güzin, D. Öztürk, C. Omurcan, and N. Yücel, "Transuterine migration as a complication of intrauterine contraceptive devices: six case reports," European Journal of Contraception and Reproductive Health Care, vol. 9,no. 3, pp. 194–200, 2004.
3. T. A. El-Diasty, A. A. Shokeir, M. S. El-Gharib, L. S. Sherif, and M. A. Shamaa, "Bladder stone: a complication of intravesical migration of lippes loop: case report," Scandinavian Journal of Urology and Nephrology, vol. 27, no. 2, pp. 279–280, 1993.
4. B. Kassab and P. Audra, "The migrating intrauterine device. Case report and review of the literature," Contraception, Fertilite, Sexualite, vol. 27, no. 10, pp. 696–700, 1999.
5. Shin DG, Kim TN, Lee W (2012) Intrauterine device embedded into the bladder wall with stone formation: Laparoscopic removal is a minimally invasive alternative to open surgery. Int Urogynecol J 23: 1129-1131
6. Rajaie Esfahani M, Abdar A (2007) Unusual migration of intrauterine device into bladder and calculus formation. Urol J 4:49-51

7. Guner B, Arikan O, Atis G, Canat L, Caskurlu T(2013) Intravesical migration of an intrauterine device. Urol J 10:818-820
8. Dietrick DD, Issa MM, Kabalin JN, Bassett Jb (1992) Intravesical migration of intrauterine device. J Urol 147:132-134
9. Atakan H, Kalpan M, Erturk E(2002) Intravesical migration of intrauterine device resulting in stone formation. Urology 60;911
10. El- Hwfnawy AS, E1-Nahas AR, Osman Y, Bazeed MA(2008) Urinary complications of migrated intrauterine contraceptive device. IntUrogynecol J Pelvis Floor Dysfunct 19;241-245