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Urinary Bladder Stone Secondary to Transmigration of Intra Uterine Contraceptive Device

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Abstract: ***An intra uterine contraceptive device (IUCD) is a high effective form of long - term contraception that is inserted into the uterus to prevent pregnancy. IUCD s are favoured for their convenience and efficacy. Despite their high success rate, complication can occur, including device expulsion, perforation of uterine wall, and increased risk of pelvic inflammatory disease. This is an uncommon case of vesical stone formation by transmigration of intrauterine contraceptive device to urinary bladder. 29 year old lady presented with urinary bladder stone formation around a migrating intra uterine device (Cu-T). Lady presented with 3 year history of irritative voiding symptoms and occasional haematuria for which she had taken treatment but symptoms were not subsided. She gave a history of Cu-T insertion 5 years ago followed by her second parturition from a community health centre in Chhattisgarh. Her Xray Kidney Ureter Bladder (KUB) showed a vesical calculus with embedded loop of copper T. Ultrasonography revealed urinary bladder stone around the IUCD. Suprapubic cystolithotomy was performed and intraoperatively it was found that 4 x 2 cm stone with Cu-T partly inside the calculus and partly in the bladder wall. Post operative period was uneventful. Information about proper insertion of intrauterine device through qualified persons, its time of insertion, proper counselling in patients going for IUCD insertion (the significance of missing thread) and the use of newer contraceptive device causing less complication is overemphasized in the present case report.***

Keywords: Cu-T, Bladder stone, Migration

1. Case Report

29-year-old female para 2 live 2 (P2L2) presented to the General surgery out patient department with complaints of recurrent haematuria in the last 3 years and intermittent fever. She stated that, her second delivery was 5 years ago, and a Cu-T was inserted by obstetrician following the delivery. 2 years following the delivery was uneventful. Further on she developed the intermittent terminal haematuria. She noticed missing of contraceptive thread from the vagina during that period.

Urine analysis revealed moderate pus cells with microscopic haematuria, organism cultured was E. coli and was started on Nitrofurantoin. Xray KUB showed a radio opaque stone within the bladder with Cu-T embedded within it. Ultrasonography suggested 4x2x2 cm stone with Cu-T inside it.

Patient was taken for cystolithotomy, intraoperatively it was found that 4 x 2 cm stone with T loop inside the stone and part of the thread within the bladder wall. On gentle traction stone with Cu-T came out. Post operative period was uneventful and patient got discharged on 5th post-surgical day. Four weeks after the surgery Cystoscopic evaluation done, not showed any abnormality in the bladder wall.

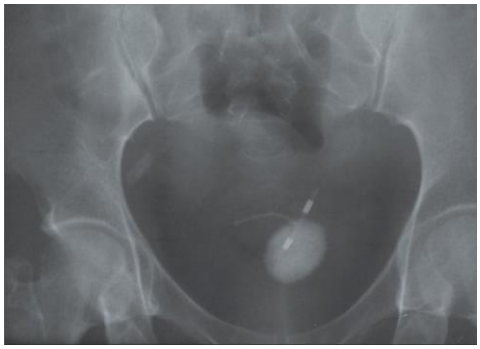

Figure 1: Xray KUB showing single large stone with linear opaque extension suspicious of foreign body.

Figure 2: Bladder stone with Cu-T embedded within it

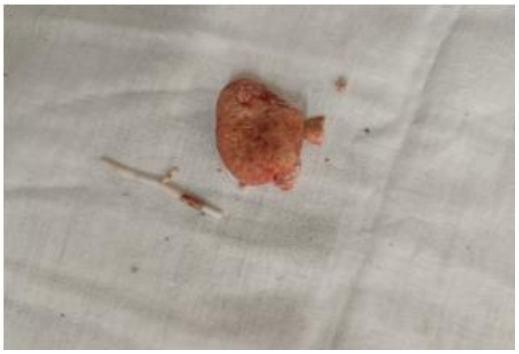

Figure 3: Extracted Bladder stone with Cu-T,

2. Discussion

Intrauterine contraceptive devices are the accepted contraceptive method worldwide. Its complications include UTI, spontaneous abortion, and uterine perforation [5] Although perforation of the uterus by an intrauterine device range from less than 1 in 1000 to no more than 9 in 1000 i.e., Uterine perforation has been reported in 0.1% of cases [6]. Migration of the IUCD into the surrounding organs or the abdominal cavity is a rare complication. This migration could be missed and mistaken as ‘‘fallen out’’ IUCD, as in our case [5]. Urinary bladder stone secondary to transmigration of intra uterine contraceptive device is an extremely rare complication of IUCD insertion [3–9]. Copper in the IUCD acts as a foreign material elicits an inflammatory reaction and acts as source for stone formation. The infections constitute a separate predisposing factor [4]. Factors predisposing to uterine perforation following IUCD include insertion of the device by untrained persons, malposition position of the IUCD, susceptible uterine wall due to multiple pregnancies, and a recent abortion or pregnancy [5]. In addition, infection and tissue damage caused by the instrumentalization during IUCD placement can lead to adhesions and thus facilitate the perforation of the uterus [7]. The clinical symptoms of uterine perforation and IUCD migration may get delayed and the condition may remain masked for several years, as in our case.

As majority of the bladder calculi are radio-opaque, they can be diagnosed by plain X ray of the urinary system, supplemented by ultrasonography and CT scan. Treatment options include open laparotomy and removal, as also the minimally invasive techniques like endoscopic removal aided by litho-triptor [7]. In conclusion, the present case highlights the importance of a simple X ray examination of the pelvis in case of a missed IUCD. Presence of recurrent UTI and lower urinary tract symptoms in a woman with a missed IUCD should raise the suspicion of migrated IUCD inside the bladder.

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