

Case Report

THE MISSING THREAD AND A FOREIGN BODY: A CASE REPORT**Authors:****Dr. M.B. Hoogar¹, Dr. Abhilasha^{2*}, Dr. Naresh Kulkarni³***¹Associate Professor, Department of Pathology, MGMIHS, Navi Mumbai-410209, Maharashtra**²Post-graduate student, Department of Pathology, MGMIHS, Navi Mumbai-410209, Maharashtra**³Assistant Professor, Department of Pathology, MGMIHS, Navi Mumbai-410209, Maharashtra****Corresponding Author: Dr. Abhilasha**, Department of Pathology, MGM Institute of Medical Science Navi Mumbai – 410209, Maharashtra, India, Email: karnabilashadr@gmail.com

Article Received: 22-09-2022

Revised: 12-10-2022

Accepted: 02-11-2022

ABSTRACT

Intrauterine devices (IUD) were invented in 1909 by Richard Richter. Copper variant of the device was developed in 1967 by Howard Tatum and Jamie Zipper. It is one of the most preferred methods of contraception worldwide. In India, CuT 380A is supplied free of cost by the government under national program and the device is effective up to eight to ten years of insertion. Common side effects of IUD are spotting, menorrhagia, dysmenorrhea etc. Rare side effects which lead to discontinuation of use are perforation, ectopic pregnancy and infertility due to infection. Many cases have been reported where IUD have perforated the uterus and have 'wandered' to omentum, intestine, urinary tract etc. The copper which gets released causes foreign body reaction in the tissue it penetrates.

KEYWORDS: *IUD, perforation, contraceptive, giant cells***INTRODUCTION:**

Intrauterine devices were introduced in 1909 by Richard Richter. These are of two types which are currently being used i.e., copper and hormonal. In initial phases, other metals such as silver were also been used but due to severity of side effects and feasibility, they have been withdrawn.[1] Intrauterine contraceptive devices are contraception of choice in 14.5% in developing countries and 7.6% in developed nations.[2] In India, 1.5% of women use IUD as method of contraception. The Government of India has launched National Program for family planning under which there is a free supply of CuT 380A (Copper T 380A) under the name of Multiload 380A. Many women have been benefitted from the current program. CuT 380A has an efficacy of eight to ten tears, hence the compliance is good among users.[3] CuT 380A is composed of horizontal and vertical arms for copper wire with two monofilament threads. Thread is checked to ensure the proper positioning of the device. One of the serious complications of IUD insertion is uterine perforation leading to attachment of device on other subjacent organs such as omentum, intestines, urinary tract etc. [4],[6] Due to constant elution of copper in the area where it gets attached there is a 'foreign body reaction' due to inflammatory response. They can lead to foreign body giant cells or foreign body granuloma formation with epithelioid histiocytosis. [5]

CASE-REPORT:

A 29-year-old female had presented to the out-patient Department of Gynecology with complaint of pain in lower abdomen for one month and missing thread in vagina. On ultrasonography, uterus was retroverted and IUCD was noted subjacent to uterus in adjoining omentum. Patient didn't have any history of device manipulation or trauma in the past. No other significant history was noted. Patient was taken up for exploratory laparotomy after pre-anesthetic check-up. While operating the patient, an IUCD embedded in fibrofatty tissue was found near uterus. The device with the tissue was sent in formalin for histopathological examination.

DISCUSSION:

On gross examination, one grey-white to grey-brown, soft to firm tissue piece measuring 9 x 3.5 x 2 cm was received. External surface had few hemorrhagic areas with attached thread. On cut section, contraceptive device was identified.



Fig 1: Gross specimen



Fig 2: Cut section



Fig 3: CuT 380A retrieved.

On microscopy, well circumscribed lesion comprising of mature adipocyte with eccentrically placed nuclei separated by fibrous septa with mixed inflammatory infiltrate comprising lymphocytes, neutrophils and eosinophils. Also noted at few places were giant cells and histiocytes along with focal areas of fat necrosis.

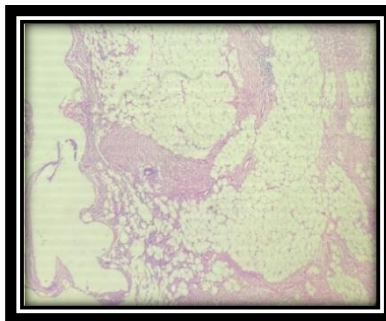


Fig 4: Mature adipocytes

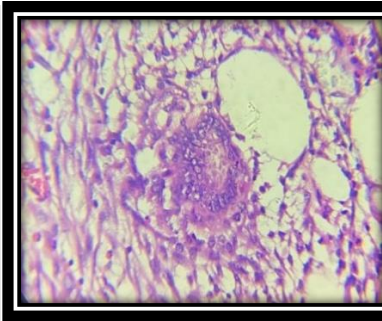


Fig 5: 10 X

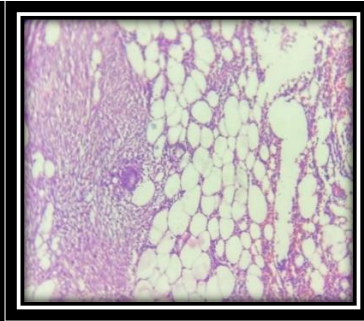


Fig 6: Foreign-body Giant cell

Sheppard BL et al in their study ‘Endometrial morphological changes in IUD users: a review. Contraception’ concluded that all intrauterine devices lead to foreign-body reaction. In a similar study by Sheppard BL, Bonnar J et al it was seen that the incidence of foreign body reaction in an inert IUD and copper device are almost same. Another study by Ortiz ME et al puts light to the fact that the foreign-body type inflammatory reaction mounted by the IUD is one of the chief mechanisms of action leading to formation of noxious environment for the spermatozoa and fertilized embryo.

CONCLUSION:

Copper elusion from the intrauterine copper device, gives rise to foreign-body reaction comprising giant cells, mononuclear inflammatory cells. Despite the adverse effects and complications, intrauterine devices are a popular method of contraception, however the trend is shifting towards the hormonal intrauterine devices from the metallic ones.

REFERENCES:

1. Higginbotham, Victoria, “Copper Intrauterine Device (IUD)”. Embryo Project Encyclopedia (2018-07-05). ISSN: 1940-5030
2. D’Arcangues C. Worldwide use of intrauterine devices for contraception. Contraception. 2007 Jun;75(6 Suppl):S2-7. Doi:10.1016/j.contraception.2006.12.024. Epub 2007 Apr 19. PMID: 17531612

3. Pachauri S. Priority strategies for India's family planning programme. *Indian J Med Res.* 2014 Nov;140 Suppl(Suppl 1):S137-46. PMID: PMC4345745.
4. Rowlands S, Oloto E, Horwell DH. Intrauterine Copper devices and risk of uterine perforation: current perspectives. *Open Access J Contracept.* 2016 Mar 16; 7:19-32. Doi: 10.2147/OAJC.S85546. PMID: 29386934; PMID: PMC5683155
5. Hirish BC, Johnson WC. Pathology of granulomatous diseases. Foreign body granulomas. *Int J Dermatol.* 1984 Oct;23(8):531-8. Doi10.1111/j.1365-4362.1984.tb04204.x. PMID:6209232
6. Gupta P, Gupta MM, Sharma R. Intrauterine Copper Device (CuT380A) as a Contraceptive Method in the Indian Context: Acceptability, Safety and Efficacy Depending on the timing of Insertion. *J Obstet Gynaecol India.* 2018 Apr;68(2):129-135. Doi: 10.1007/s13224-017-1079-z. Epub 2017 Dec 2. PMID: 29662283; PMID: PMC5895549.