

# Intrauterine Contraceptive Device, Simple Yet Still A Dilemma



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## Introduction

Intrauterine contraceptive device (IUCD) is one of the contraceptive methods and its efficacy is as high as 90% [1]. Increasing use of this device has led to an increase in its related complications. These complications include infection (1%), uterine perforation (0.1%), expulsion of device (5%), failure to prevent pregnancy as well as ectopic pregnancy (0.5-1%), menstrual problems like menorrhagia or dysmenorrhea, migration into the pelvic cavity (misplacements) (5%) and the frequent clinical problem is the lost tail or loss of the filament at the external cervical os [2]. There were so many studies about IUCD and its sequelae. The commonest and most attractive area is misplacement or migration and loss of IUCD thread. Clinicians from all over the world proved that hysteroscope is the best option to find the lost device in the uterine cavity. There were studies recommending usage of hysteroscopy for embedded or displaced IUCD. A study by Zuan Chong Feng et al. mentioned that hysteroscopy with an ultrasound B-scan is of great value not only for precise location but also for its removal under direct vision, particularly in the management of patients with broken and/or embedded IUCD pieces [3]. A study by Dwyer and James revealed that the incidence of difficulties associated with IUCD removal may occur in up to 9% of follow-up visits of women who have been fitted with IUCD [4]. According to the evidence, incidence of intrauterine device perforation is 0.87 per 1000 insertions [5]. (Ofer Markovitch et al.) Most perforations occur at the time of insertion and the risk is increased in the 4-8 weeks postpartum. When the string is found to be missing, pregnancy must be excluded, and the endometrial cavity explored. Ultrasonography can often determine if the IUCD is in the uterus; most IUCDs that perforate the uterus are often found in the pelvis [5].

There are several studies looking into factors influencing uterine perforation during insertion. These factors consist of the insertion during post-partum or lactation period, the force used during insertion and the experience of the operator. There are 3 types of perforation classified according to the compartments involved:

- A. Compartment 1= uterine cavity
- B. Compartment 2= Myometrium
- C. Compartment 3= peritoneal cavity [6]

Thus, in

Type 1-2 Partial perforation, the IUD is partially in the uterine cavity and myometrium

Type 2 Myometrium only

Type 2-3 Myometrium and peritoneal cavity

Uterine perforation and deeply embedded intrauterine device require exact determination of its location to ensure safe and smooth retrieval. One study from Radiology Journal suggested doing hystero-graphy as it offered the most precise diagnostic information. With the advent of 3D Ultrasound, the combination of ultrasound and hysteroscopy are well-recognized effective treatment option [7]. For extrauterine misplaced IUCD, surgical removal is recommended by most of the clinicians as there is a putative risk of adhesion formation or damage to the nearby structures such as intestines or bladder [5]. However, there are limited studies regarding embedded IUCDs; although there is a role of hysteroscopy for its removal. There are conflicting evidences in different literatures regarding management of cases of embedded IUCD [8]. The management differs in either to remove the IUCD by using resectoscope or leaving in uterine wall although there is a possibility of migration into the pelvic cavity and abnormal uterine bleeding with infection. A study by Zuan Chong Feng et al indicated one out of 274 cases in their study remained a small piece in the uterine wall due to breakage of IUCD during extraction but, the study did not highlight the outcome of leaving behind small pieces. There will be concerns about the copper used in the device. When biological materials come into contact with copper, it is corroded and the compounds that are formed can produce irritation and other reactions like adhesion. However, as far as we learned, there is no clear evidence that harm is actually done.