

# CASE REPORT

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## INTRAUTERINE DEVICE AND INTESTINAL INJURY: NEED FOR INTROSPECTION

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**ABSTRACT:** Intestinal injury following uterine perforation is a serious complication of intrauterine device (IUD) application. It can be in the form of obstruction, perforation or ischemia leading to stricture or fistulae formation. Perforation commonly involves sigmoid colon followed by the small intestine and rectum. Acute complications like peritonitis may occur sometimes leading to death. These complications commonly occur during insertion. Very rarely it may occur during the IUD removal. We are reporting an unusual case of small intestinal (ileum) injury during IUD removal leading to peritonitis.

**KEY-WORDS:** Intrauterine devices, Intestinal injury, Perforation, Peritonitis

**INTRODUCTION:** One of the most serious complications associated with the insertion of intrauterine devices (IUD) is uterine perforation. The reported incidence of uterine perforation ranges from 0.05 to 13 per 1,000 insertions, varying according to several factors related to the patient, operator and IUD<sup>(1-2)</sup>. The factors associated with uterine perforation are the type of IUDs, the timing of insertion with respect to the termination of pregnancy, the position i.e. anatomy of the uterus, the insertion technique, and the experience of the person inserting the IUD.<sup>(3)</sup> Uterine perforation can be iatrogenic, during the insertion, by the applied mechanical force (primary perforation) or spontaneously afterward (secondary perforation). Fifteen percent of uterine perforations involve adjacent organs, usually the small or large intestines.<sup>(2)</sup> IUD-related complications involving the intestines include obstruction, perforation, ischemia, mesenteric injury, stricture and fistulae.<sup>(3)</sup> Although intestinal injuries occur during insertion, it is unusual during removal of IUD.

We are reporting a case of small intestinal perforation during removal of a copper T380A IUD.

**THE CASE:** A 27-year-old, para 1 female was admitted in our hospital with history of severe pain abdomen, fever and abdominal distension for 4 days. She had history of an IUD (copper T380A) insertion one year back in an outside hospital immediately after her first delivery. Her menstrual periods were regular with heavy bleeding and pain for which she wanted to remove the IUD. Last menstrual period was 15 days back. The IUD was removed 4 days back in the same outside hospital. She experienced some difficulty during the process of removal. It was manipulated with instruments and she had severe pain and minimal vaginal bleeding during the process. Next day she had severe pain abdomen for which she again visited the same hospital. She was prescribed analgesic and advised to take rest. However, since the pain, fever and abdominal distension persisted in spite of medication, she visited our hospital

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On general examination, she appeared very sick with a temperature of 104°F and pulse rate of 120 beats per minute. Abdomen was distended with severe tenderness all over the abdomen with muscle guarding and absence of bowel sounds. Speculum examination did not reveal any abnormality. On bi-manual examination, the exact size, shape and position of uterus and adnexa could not be elicited.

Haematological and urine examination did not reveal any abnormality except leucocytosis (Total count 22,000 per cubic mm) and neutrophilia (85% were Neutrophils). Abdomino-pelvic ultrasound showed free fluid in peritoneal cavity. There was gas under diaphragm and multiple air fluid levels in plain x-ray of abdomen. A CT scan of the abdomen and pelvis was performed that showed fluid in peritoneal cavity. Pus like fluid was aspirated from peritoneal cavity.

Laparotomy was done under general anaesthesia on same day. There was around 1 litre of exudative fluid inside peritoneal cavity (Fig.1). A rent of about 1.5cm x 1.5 cm was present on the anterior wall of uterus just above the isthmus (Fig.2). Tubes and ovaries were found to be healthy. There was a perforation of 1.5 cm X 1.5 cm in the ileum, 2 feet proximal to ileo-caecal junction (Fig.3). There was no injury in colon, omentum or other abdominal or pelvic organs. Both uterine and intestinal perforations were repaired. Peritoneal cavity was thoroughly washed and intra-peritoneal drain was given. Although, there was minor complications during postoperative period, she recovered well and discharged on 15<sup>th</sup> day.

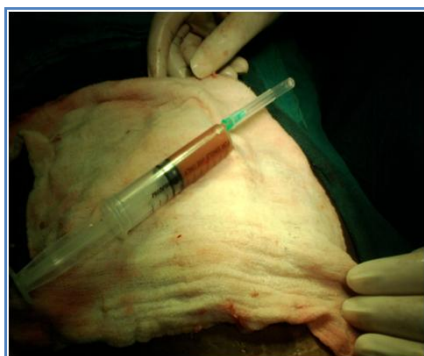


Fig. 1: Intraoperative view of Collected peritoneal fluid



Fig. 2: Intraoperative view of repaired uterine perforation



Fig. 3: Intraoperative view of small intestinal perforation

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**DISCUSSION:** The present case report describes an injury to ileum which occurred at the time of removal of IUD. IUD-related intestinal perforations primarily involved the sigmoid colon, followed by the small intestine and rectum.<sup>(4)</sup> Arslan et al in a review of the literature identified 47 cases of uterine perforation complicated by intestinal penetration. <sup>(3)</sup>The Copper-7 and copper-T IUD accounted for half the reported cases of intestinal perforation in the literature. However, in all cases the perforation occurred at the time of insertion or afterwards. There are no reported cases of intestinal injury at the time of removal.

It is unusual to have uterine perforation and intestinal injury during the removal of IUD. If the thread is visible it can be removed easily. When the thread is not visible we can take the help of diagnostic modalities and proceed accordingly. Extra uterine translocated IUD can be removed laparoscopically.<sup>(5-6)</sup> If it is embedded inside myometrium or any difficulty arises during vaginal removal than it can be removed by hysteroscope. Blind intrauterine manipulations may produce uterine perforation ultimately leading to intestinal injuries even death due to peritonitis or injury to blood vessels. Therefore, with the availability of endoscopes (laparoscope and hysteroscope) blind procedures should be discouraged.

It is time for introspection by the health care providers whether such injuries are acceptable or not. Adherence to guidelines is necessary to avoid such complications. Hence, the use of proper technique is required not only during IUD insertion but also at the time of removal to avoid life threatening complications.

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