



First Trimester Pregnancy Termination Resulted in Ileum Perforation and Dislocated Intrauterine Device: A Mortality Case Report

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Abstract

Although cervical dilatation, curettage and evacuation, which are commonly practised interventions of gynecology, are considered safe, they are associated with a serious complication such as uterine perforation. During the insertion of IUD, which is an easy procedure to perform, uterine perforation may occur as an undesirable complication. In 15% of the cases with uterine perforation due to dislocated intrauterine device, neighboring organs, the small intestine being in the first place, are also involved. In this study, we discussed a case who had an IUD, which dislocated into the abdomen after uterine perforation and perforated the ileum, and who died afterwards.

Keywords: Cervical Dilatation; Dislocated Intrauterine Device; Ileum Perforation; Uterine Curettage

Introduction

The surgical procedures of cervical dilatation and uterine evacuation are frequently performed procedures in gynecology practice [1]. Although these interventions are called as minor interventions in practice since they are considered safe, it should be known that a serious complication such as uterine perforation may occur during these interventions [2]. Intrauterine device (IUD) is the most widely used contraceptive method since it is reversible and it has low rates of complication and cost [3]. The ratio of uterine perforation complication due to IUD insertion is reported to be 1.2/1000 [4,5]. The majority of uterine perforations are believed to occur during insertion [5]. Uterus perforation, which may lead to complaints such as vaginal bleeding and abdominal pain, may remain unrecognized for years without causing any symptoms [6,7]. The most important complication of IUD perforations, which occur at the rate of 15%, is intestinal perforation [8]. The IUD complicated with intestinal system usually manifests itself with various clinical presentations such as intestinal obstruction, peritonitis, mesenteric penetration and intraabdominal hemorrhage, intestinal infarction, and development of fistula between uterus and intestinal organs [7,8].

In this study we aimed to present a case with first trimester pregnancy termination resulted in ileal perforation and dislocated IUD and who died afterwards.

Case Study

A 32-year-old gravida 6, para 4, abortus 2 patient with the history of cesarean section twice and unknown date of last menstrual period was admitted to the emergency room with the complaints of abdominal pain and vaginal bleeding. The history revealed that seven weeks of gestation was terminated deliberately six days ago and simultaneously an IUD (Copper T 380A ®) was inserted. On admission, the general condition of the patient was moderate, heart rate was 88/min, temperature was 37.7 °C and her blood pressure was measured as 110/60 mmHg. Abdominal examination revealed generalized tenderness, guarding and rebound in bilateral lower quadrants. On pelvic examination, the string of IUD was not visualized in the cervix and there was feeling of fullness in the left adnexial region. Transvaginal ultrasound showed that uterine was normal in size, bilateral adnexia were normal and there was free fluid containing semisolid components in the Douglas' pouch. The whole abdominal CT of the patient showed an image consistent

with the echogenicity of IUD in the upper abdomen and echogenities and septations with air-fluid level belonging to the dense fluid content within the pelvic region and a loculated collection measuring approximately 9x5 cm in size and including debris in the Douglas' pouch and this formation was reported as it may be suggestive in terms of abscess. The white blood cell count was 19650/mm³, hemoglobin was 11.2 g/dL, C-reactive protein was 38 mg/L and platelet count was 572000/mm³. Due to acute abdomen findings of the patient, laparotomy was decided. The abdomen was entered via subumbilical median incision. The abdomen was observed to be filled with the content of small intestine. The IUD was observed to be embedded within the omentum. In the fundal part of uterus, a self-limiting image consistent with rupture of one cm was seen (Figure 1). Also, perforation area of one cm was detected in the ileum (Figure 2). The IUD embedded within the omentum was removed. The patient underwent small bowel resection and ileostomy was performed by general surgery and an abdominal drain was placed by the gynecologist then she was transferred to the intensive care unit. General condition and vital findings of the patient were disrupted on Postoperative 3 days. The patient died due to intraabdominal sepsis in the intensive care unit on postoperative day seventh.



Figure 1: It has been shown that rupture in the uterus fundus



Figure 2: It has been shown that perforation in the ileum

Discussion

Although cervical dilatation and uterine curettage, which are called as nearly the most commonly used minor surgical procedures in gynecology practice, are referred as safe and simple procedures, a very serious complication such as uterine perforation may be encountered during these procedures. The actual incidence of perforation is not known clearly since it may recover without being recognized. The literature data on the rates of uterine perforation encountered during cervical dilatation and uterine evacuation procedures performed to terminate first trimester pregnancy is observed to vary between 0.05% and 1.9% [9]. Some risk factors were defined in terms of uterine perforation during

cervical dilatation and curettage. The experience of surgeon is probably one of the most important factors [10]. Also, advanced age, retrovert uterus, lack of vaginal delivery, previous cervical surgeries and dilatation difficulties during procedure are shown among the risk factors associated with uterine perforation [10,11]. If uterine perforation occurs despite all precautions and surgeon continues to operate without noticing it, the risk of injury to the neighboring pelvic organs increases [12,13]. In addition to uterine perforation, bowel injuries, intraabdominal solid organ injuries, and even great vessel injuries are reported in the literature with high morbidity and even mortality [9,13].

The most serious complication of IUD insertion is perforation [14]. Organ injuries occurring as a result of IUD dislocation were shown to be most commonly associated with sigmoid colon (40.4%), small intestines (21.3%), and rectum (21.3%)[15]. The frequency of uterine perforation secondary to IUD is associated with the type of IUD, experience of performer, position of uterus, and the time of insertion [14,15]. The most common period in which perforation occurs most commonly is after its insertion in the postpartum or postabortal period. However, it should be kept in mind that perforation may occur no matter how experienced the performer is [8,14,17]. In our case, it was found out that the IUD was inserted after terminating pregnancy by the same doctor who performed the procedure. However, no clear information could be obtained regarding whether the perforation was due to uterine curettage or due to the IUD inserted afterwards. But, our interpretation is that perforation might have occurred during uterine curettage, and that the IUD was dislocated into the abdomen secondary to this perforation. The majority of uterine perforations occur on the posterior and fundal wall [8,14,17]. No intraabdominal organ injury occurs in 85% of these perforations however, other intraabdominal organ injuries, especially intestinal injuries, can be seen in the remaining patients [8,14,15].

In our case, perforation was detected in the posterior fundal region and in the ileum. The surgical instrument used during perforation outstands as one of the important points in uterine perforation occurring during minor gynecologic interventions. Particularly, in the first trimester pregnancy termination and in the perforations that occur while aspirating endometrial cavity, when the cannulas pass into the abdominal cavity, they may aspirate the neighboring pelvic organs within themselves. In this situation, omentum, small or large bowel injuries are frequently encountered [2,9,12]. If uterine perforation is suspected or noticed, the procedure should be terminated immediately. In this situation, depending on the type of surgical device causing perforation, and indication for minor intervention of the patient, follow-up treatment or additional surgical interventions may be performed. Some authors recommend passing on surgical intervention without delay in order to assess perforation while some authors suggest close follow-up in all cases [1]. Although there is no consensus on the management of perforation, the choice of surgeon, type of surgical instrument causing perforation, and indication of patient have impact on the management of complications [1,9,12].

We could not find out the type of instruments used in our case. Laparoscopy has been accepted as a reliable and effective method for the removal of intraabdominal IUD and laparotomy is preferred in the cases in whom success can not be achieved with laparoscopy [18]. We think laparoscopy is not suitable for this case. In our case, pelvic ultrasonography and CT were used to determine the missing IUD and the IUD dislocated into the abdomen was detected. It was noticed only during laparotomy that the IUD penetrated into the ileum. Laparotomy was preferred since we had more clinical experience in this area.

In conclusion, uterine perforation, and neighboring organ injury that may occur as a result of this complication are one of the pathologies causing maternal morbidity and mortality. Despite all kinds of precautions, the cases with uterine perforation and IUD dislocation are encountered even in the most experienced hands. Therefore, the patients in whom IUD was inserted should be informed about the possible suspicious symptoms in terms of perforation and intraabdominal organ injury.

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