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LAPAROSCOPIC TREATMENT FOR REMOVAL OF INTRAUTERINE DEVICE, AFTER ITS PLACEMENT WITH UTERINE PERFORATION

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ABSTRACT

The incidence of uterine perforation ranges from 0.3 to 2.6 for every 1,000 insertions of the levonorgestrel-delivery intrauterine delivery system (LNG-IUS) and from 0.3 to 2.2 for copper IUDs. Some risk factors can increase the chance of perforation during the insertion of the devices, such as breastfeeding and puerperium, lack of experience of the health professional who performs the insertion, multiparity, nulliparity, and previous cesarean sections. ³ When this complication is not identified in time, complications such as peritoneal adhesions and hypovolemic shock may occur. This case report addresses a 27-year-old female patient, admitted to the Santa Casa de Misericórdia, 30 days after IUD placement, they presented abdominal pain located in the lower abdomen, without irradiation, of moderate intensity, associated with nausea and without vomiting episodes, an imaging exam was performed that identified IUDs outside the uterine cavity, Surgery was indicated, and the patient was well, discharged from the 1st postoperative period.

Keywords: IUD. Uterus. Drilling. Abdominal cavity. Videolaparoscopy.

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INTRODUCTION

The intrauterine device (IUD) is the most widely used reversible contraceptive method in the world today.[1] They are highly effective, safe, and relatively inexpensive, offering advantages for some women over other long-term methods. IUDs offer protection against pregnancy comparable to that provided by female sterilization.[2]

The contraindications of its use are few, such as uterine malformations, submucosal fibroids, and pelvic inflammatory processes. Despite being widely used, the IUD is not free of complications, with uterine perforation being the most serious of them. In most cases, the perforation occurs at the time of insertion, so there may be displacement of the IUD out of the uterine cavity.[1]

The incidence of uterine perforation ranges from 0.3 to 2.6 for every 1,000 insertions of the levonorgestrel-delivery intrauterine delivery system (LNG-IUS) and from 0.3 to 2.2 for copper IUDs. In most cases, the perforation is not recognized at the time of insertion. Only 9% of complications with IUS-ING and 20% of cases with copper IUDs were noticed at the time of insertion.[3]

Some risk factors can increase the chance of puncture during device insertion. Breastfeeding and puerperium are associated with an increased risk of perforation, but these have never been independently examined. Other risk factors are: lack of experience of the health professional who performs the insertion, multiparity, nulliparity, and previous cesarean sections.[3]

The risk of perforation is higher among patients who are inserting IUDs for the first time, compared to patients who have used them before. The breastfeeding period is an important risk factor for uterine perforation. The length of time between delivery and IUD insertion also influences risk. It is known that the shorter the period between delivery and insertion, the greater the chances of perforation. The experience of the healthcare professional also influences the risk of perforation. Professionals who insert fewer than 50 IUDs per year are likely to be at higher risk of perforation than those who insert more than 50 IUDs per year. Uterine positioning is directly related to cases of perforation, occurring in 42% of retroverted uteruses. The orientation of the uterine body about the cervix (flexion) should also be considered, which increases the risk of perforation at the time of insertion.[3]

When it occurs, uterine perforation is most often complete (84% complete × 16% partial). Discovery of drilling occurs within 2 months in more than 50% of cases. Cases of uterine perforation can also present in a more serious way in emergency services, such

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as hypovolemic shock or even septic shock. Other conditions may occur, and a differential diagnosis should be established with the rupture of a hemorrhagic or endometriotic cyst and ruptured ectopic pregnancy.[3] Ideally, the IUD should be inserted in the last days of menstruation and, after pregnancy, it seems preferable to wait for the return of the menstrual period. An examination is recommended 2-3 months after insertion and every 6-12 months thereafter. Perforation and bleeding are the top 2 issues. [4]

Although some authors recommend expectant management in cases of complete perforations, with the IUD in the peritoneal cavity and the patient asymptomatic, it is recommended, in most cases, IUD extraction by video laparoscopy, as the occurrence of peritoneal adhesions seems to increase over time. The surgery, however, does not need to be done on an emergency basis, and the patient must be adequately prepared. In the case of emergency care, when intra-abdominal hemorrhage is suspected, a thorough clinical examination should be performed, evaluating lucidity, state of anxiety and agitation, or sign of torpor, associated with abdominal pain. The extent of the hemorrhage, the presence of a wide ligament hematoma, bowel loop lesions, or signs of infectious peritonitis should be assessed. The signs and symptoms will reveal whether or not the patient is in hypovolemic shock. When not diagnosed correctly, it can progress to acute renal failure and disseminated intravascular coagulation, leading to death. Laboratory tests help quantify blood loss and the need for blood transfusion, in addition to helping the diagnosis of pelvic infection. Treatment is mainly surgical, consisting of locating and removing the device and identifying probable organ lesions, such as the bladder or intestinal loop. The laparoscopic approach, which is an important therapeutic option, except in patients with hypovolemic shock, allows a panoramic view of the peritoneal cavity, which is important for visualization and removal of the intra-abdominal device and treatment of possible associated lesions.[3]

BACKGROUND

The scarcity of studies related to perforation by intrauterine devices interferes with the prognosis of patients who may develop this complication in the future. Intrauterine devices (IUDs) are the oldest of the modern contraceptives, and both offer high contraceptive efficacy. The literature also brings its share of new information about IUDs: impact on cancer risk, non-contraceptive benefits, rare adverse effects, and impact on women's well-being. The placement of this device is simple, and often performed on an

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outpatient basis in a doctor's office, however, complications, such as perforation and installation of it in the abdominal cavity, can cause physical and emotional damage to the patient, which can interfere with the replacement and impair the contraceptive action, with consequent action even in the birth rate.

This study is a case report associated with a literature review in the main literature databases, which aims to elucidate a minimally invasive treatment to expose in the database a therapeutic alternative to this complication, with less physical damage to the patient with early recovery, as well as to demonstrate to professionals in the area a better time for IUD installation, In this way, minimize the damage to the patient with a new surgical intervention.

OBJECTIVES

GENERAL OBJECTIVES

To report a case of a patient with complications after placing an intrauterine device, to describe an individual circumstance of the patient, address the sequence of events, clinical history, as well as exams and other relevant particular information of the case.

SPECIFIC OBJECTIVES

- Address the most common causes that influence perforation with IUD placement, such as period and number of cesarean sections, nulliparity, the experience of the health professional, as well as the peculiarities related to its installation;
- Expose data from the literature related to its installation and number of complications;
- Discuss possible treatment alternatives, as well as identify the importance of laparoscopy, which is a minimally invasive procedure, to correct a complication, after placement of the intrauterine device, to minimize as much damage as possible to other patients who may suffer the same complication.
- Expose the importance of the theme to reduce the damage caused to patients.

METHODS

A bibliographic survey was carried out in the main databases (PubMed and SciELO), in the search tool the last five years (2019-2024) were selected, and the keywords used in the search were *"IUD, uterus, perforation, abdominal cavity, video*

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laparoscopy.", 47 articles were selected, being carefully evaluated, identifying only nine for our work, Associated with information about the patient's case obtained through the medical record, requested at the Santa Casa de Misericórdia de Presidente Prudente, the institution where the surgery was performed, photographic record of the diagnostic methods and data offered in interviews with the patient, all steps strictly following the terms of informed medical consent, as well as – ICF, STATEMENT OF RESEARCHERS, TERM OF INSTITUTIONAL CONSENT AND COVER PAGE FOR RESEARCH INVOLVING HUMAN BEINGS.

CASE DESCRIPTION

F.V.S., 27 years old, female, admitted to the Santa Casa de Misericordia, referred from the gynecologist's medical office, complaining of abdominal pain located in the lower abdomen, without irradiation, of moderate intensity, associated with nausea and without episodes of vomiting, reports that 30 days ago she underwent a procedure inside the operating room for the placement of an IUD, She was conscious, calm, with dialogue, walks, reports not having any associated comorbidity, or allergic. On physical examination, the patient was in good general aspect, flushed, hydrated, afebrile eupneic (36.5), tachypneic (heart rate 120 bpm), abdomen flaccid, bowel sounds present, with pain on abdominal palpation in the lower abdomen, no signs of peritonitis, other devices without alterations. Imaging exams were requested: Radiography.

- Acute abdomen and Ultrasonography - Transvaginal - Pelvis. The radiograph obtained in the supine and orthostatic position showed a radiopaque image (IUD) on the left in an unusual position (Figure I). Ultrasonography shows that the intrauterine device (IUD) is located in the left adnexal region, close to the uterine horn, in close contact with the iliac vessels on this side.

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Figure 1 - Plain X-ray of the abdomen in the orthostatic position with the presence of a foreign body in the left lower quadrant (IUD). Source: The author.

Laboratory tests were also requested: Creatine - Plasma serum, Blood count, Urine routine, Sodium - Plasma serum, Urea - Plasma serum, Prothrombin time - determination, and Activated partial thromboplastin time - determination. No changes.

The diagnosis of a foreign body in the abdominal cavity, extrauterine IUD, was confirmed, and exploratory video laparoscopy was indicated.

The patient was referred to the operating room within 2 hours of her admission to the hospital, admitted to the operating room, and the surgical procedure was initiated. In laparoscopic access, the IUD was located in the left iliac fossa next to the intestinal loops and epiplon (Figures 2 and 3), an inventory of the abdominal cavity was performed, and no lesions were identified in the loops. Other organs without alterations and the IUD were removed without intercurrences, received a diet on the same day of surgery, and discharged on the 1st postoperative day.

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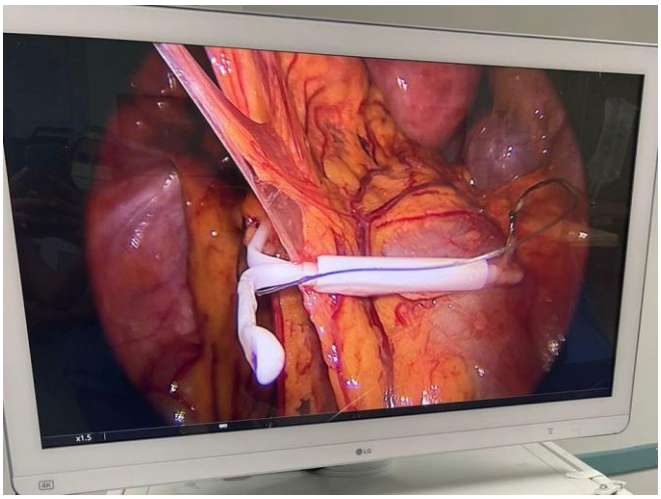
Figure 2 - Laparoscopic image identifying a foreign body (IUD) with adhesions with the omentum and abdominal fat. Source: The author.

Figure 3 - Laparoscopic image identifying a foreign body (IUD) between the hips of the small bow after the release of adhesions. Source: The author.



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