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Tubal Ectopic Pregnancy 12 Weeks after Laparoscopic Supracervical Hysterectomy and Tubal Ligation

Andrée F Maheux, Simon Kind

Department of Emergency Medicine, Université Laval, Québec, Canada

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ABSTRACT

Introduction: Since 1895, at least 67 ectopic pregnancies have been reported in patients previously subjected to hysterectomy. Most of them were abdominal or vaginal total hysterectomies. Only four cases of ectopic pregnancies in patients who had undergone hysterectomies have been reported after a laparoscopic supracervical hysterectomy (LSH), with three of them having occurred years after surgery.

Case Report: A 40-year-old white Caucasian woman was admitted to the emergency room with acute abdominal pain for 20 min, 12 weeks after LSH and tubal ligation. Rapid examination using ultrasounds scan did not show free liquid in the abdomen, and initially, the cause of pain was not identified. However, the patient became unstable and 4 h after symptom presentation, a second ultrasound scan revealed a significant amount of free liquid in the abdomen. Quantification of β-HCG confirmed the suspicion of a ruptured tubal ectopic pregnancy.

Conclusions: Ectopic pregnancy is one of the conditions to be considered in differential diagnosis of abdominal pain in women of child-bearing age. To the best of our knowledge, this is the first report of an ectopic pregnancy occurring as early as 3 months after LSH and tubal ligation.

Keywords: Ectopic pregnancy, hysterectomy, tubal ligation

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Introduction

At least 67 ectopic pregnancies (abdominal, ovarian, and tubal) have been reported in patients previously subjected to hysterectomy, since its description for the first time in 1895 (1-8). Two forms of presentation are described in the literature for ectopic pregnancies in patients who had undergone hysterectomies: early and late presentations (3). Early presentation is described as occurring in the first weeks after hysterectomy. Thus, fertilization had already occurred or semen was present in the internal genital tract before hysterectomy was performed. In the late presentation, ectopic pregnancy occurs months or years after hysterectomy (4). Three mechanisms have been proposed to explain this occurrence. First, ectopic pregnancy can be explained by the presence of fistular tracts between the vaginal dome and the peritoneum or between the vaginal dome and a fallopian tube (2). A second mechanism includes prolapse of the fallopian tube into the vagina, thereby creating a vaginal-tubal communication (6). Finally, the persistence of cervical permeabilization could facilitate the passage of sperm into the peritoneal cavity (7).

Address for Correspondence:
Andrée F Maheux, Department of Emergency Medicine, Université Laval, Québec, Canada
E-mail: andree.maheux.3@ulaval.ca

Most ectopic pregnancies described in patients who had undergone hysterectomies were observed after abdominal and vaginal total hysterectomies. Only four cases of ectopic pregnancies have been reported after laparoscopic supracervical hysterectomy (LSH), three of them occurring years later (1, 2, 7). The fourth one was diagnosed 4 months after LSH (5).

In this report, we present a case of a patient who had undergone LSH who was diagnosed with an ectopic pregnancy 12 weeks after the surgery.

Case Report

We describe here the case of a 40-year-old white Caucasian woman with a history of bilateral tubal ligation and supracervical hysterectomy 12 weeks earlier and who presented to the emergency room for abdominal pain. She reported having felt a fulgurating pain located around the left iliac pit 20 min earlier. At the time of the consultation, the patient was hemodynamically stable, though the pain was described as being very intense. No masses were palpable in the adnexal regions. The abdomen was tender, with localized peritoneal irritation in the hypogastric region. Rapid ultrasound examination did not show free liquid in the abdomen, and initially, the cause of the pain was not identified. Over time, the patient became unstable and an irradiation to the left shoulder appeared. Four hours after symptom presentation, a second ultrasound scan revealed a significant amount of free liquid in the abdomen. Emergency laparoscopy revealed an ectopic pregnancy in the left tubal region, together with hemoperitoneum (2500 mL). Quantification of β-HCG enzyme levels then confirmed the suspicion of a ruptured tubal ectopic pregnancy.

Discussion

Although it is an easy diagnosis to eliminate, pregnancy is rarely considered in a woman who has undergone hysterectomy presenting with acute abdominopelvic pain. Although the one constant symptom of ectopic pregnancy is severe pain in the lower part of the abdomen, it is most probable that this pain, after hysterectomy, is attributed to more common causes, such as partial intestinal obstruction or pelvic infection. However, pregnancy should be considered in any woman with intact ovaries and still in the child-bearing age but having undergone a hysterectomy. Consequently, high index of suspicion, evaluating the history, repeated abdominal ultrasound scans, and a pregnancy test are the most important diagnostic tools for rapidly detecting post-hysterectomy ectopic pregnancy.

In early presentation of ectopic pregnancy after hysterectomy, abdominal complaints occurred 22–99 days after the surgery (8). In this presentation, an implanted pregnancy has escaped diagnosis 1) during the pregnancy test because of its age and 2) during surgery because of its size. In most cases, menstrual histories of patients reveal removal of the uterus between days 16 and 19 of their menstrual cycle as well as unprotected sexual relations before the surgery (8). Hysterectomy should thus be avoided in the periovulatory or luteal phase of the menstrual cycle.

However, tubal ectopic pregnancies rarely continue over 7–8 weeks of pregnancy. Thus, cases of tubal ectopic pregnancies diagnosed after this period should be investigated for their age and those occurring after the surgery should be classified in the late form of presentation. Villegas et al. (7) have suggested that ectopic pregnancies occurring in patients subjected to LSH were mostly explained by the persistence of cervical permeabilization, which facilitates the passage of the sperm into the peritoneal cavity. In the present case, however, where the ruptured ectopic pregnancy occurred only 12 weeks after LSH, the patient reported having resumed unprotected sexual activities only 2 weeks after the surgery. This was confirmed by the β-HCG level at the moment of the rupture of the fallopian tube, corresponding to 6–7 weeks of pregnancy. This suggests that all women in their reproductive years should be advised to have protected sexual practices for at least 8–10 weeks after the surgery, instead of 6 weeks, as is usually recommended. To the best of our knowledge, this is the first report of an ectopic pregnancy occurring as early as 12 weeks post LSH.

Conclusions

Ectopic pregnancy is one of the conditions to be considered in the differential diagnosis of abdominal pain in women of child-bearing age. To the best of our knowledge, this is the first report of an ectopic pregnancy occurring as early as 3 months after LSH and tubal ligation.

Informed Consent: Written informed consent was obtained from the patient who participated in this study.

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