Successful laparoscopic treatment of an abdominal pregnancy in the posterior cul-de-sac

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Summary

Purpose: To describe the laparoscopic treatment of a first trimester abdominal pregnancy found in the cul-de-sac between the right uterosacral ligament and the rectum.

Case Report: A 32-year-old female presented to the emergency department with abdominal pain beginning a few hours prior to presentation. The serum βhCG level was 543 mIU/ml. An ultrasound examination revealed an empty uterus, bilateral normal fallopian tubes, and a large quantity of fluid in the pelvis. Secondary to patient symptoms, laparoscopy was performed. After the pelvis was irrigated to remove blood and clot, bilaterally normal fallopian tubes and ovaries were found. Further laparoscopic examination revealed an abdominal pregnancy implanted on the peritoneum between the right uterosacral ligament and the rectum. Hydrodissection was used to help elevate the peritoneum away from adjacent structures, and the products of conception were removed laparoscopically.

Conclusion: In select first trimester patients with abdominal pregnancies, laparoscopic management can be performed.

Key words: Abdominal pregnancy; Laparoscopy.

Introduction

Abdominal pregnancies are rare encompassing only 1% of all ectopic pregnancies [1]. The overall incidence ranges from 1 in 372 to 1 in 9,714 live births [2]. Standard management of abdominal pregnancy has depended upon the age of gestation and implantation site [3]. Until recently, all management schemes have centered around exploratory laparotomy [4-6].

We present the case of a 32-year-old woman with an abdominal pregnancy in the posterior cul-de-sac, between the rectum and the right uterosacral ligament, successfully treated with laparoscopic resection.

Case Report

A 32-year-old female presented to the emergency department with severe abdominal and rectal pain beginning a few hours prior to presentation. Vaginal bleeding did not begin until she was in the emergency department. Her last menstrual period was just over four weeks prior to presentation. She was evaluated by an emergency physician and a complete blood count, serum βhCG, and pelvic ultrasound were ordered. The serum βhCG level was 543 mIU/ml. An ultrasound examination revealed an empty uterus, bilateral normal fallopian tubes, and a large quantity of fluid in the pelvis.

Although the βhCG level was low, observation was not considered appropriate. Because of her symptoms, it was decided that the patient was a candidate for diagnostic laparoscopy with surgical intervention if an ectopic pregnancy was found. Direct vision entry into the abdominal cavity was performed with the Endopath Non-Bladed Obturator Trocar 511H (Ethicon-Endosurgery, Cincinnati, Ohio). Approximately 500 ml of blood and clot were found and irrigated from the pelvis. Bilaterally normal fallopian tubes and ovaries were found on examination. The uterus also appeared normal both anteriorly and posteriorly. The upper abdomen and appendix also appeared normal. Further laparoscopic examination revealed an abdominal pregnancy implanted on the peritoneum between the right uterosacral ligament and the rectum. Active bleeding from this site was noted. An attempt was made to see if this mass could be irrigated off the peritoneum, but this could not be done.

The right ureter was visually identified. The peritoneum above the implantation site was grasped with a laparoscopic grasper and pulled medially. An incision was made in the peritoneum and hydrodissection with a powered suction-irrigator was performed. The abdominal pregnancy and surrounding peritoneum were resected using the Harmonic Scalpel Laparo-Sonic Coagulating Shears (Ethicon-Endosurgery, Cincinnati, Ohio). Hemostasis was obtained by using the same device on a variable power setting and coagulating bleeding sites. All visible trophoblastic tissue was resected.

Final pathologic diagnosis confirmed an abdominal pregnancy implanted on the pelvic peritoneum. A serum βhCG was performed one week after surgery and was < 2 mIU/ml.

Conclusion

Less than 2% of all ectopic pregnancies are abdominal pregnancies [1, 7]. Although fewer in number, abdominal pregnancies account for a 17-fold increase in mortality as compared to ectopic pregnancies located in a fallopian tube [7].

Using MEDLINE and the keywords: ectopic pregnancy, abdominal pregnancy, and laparoscopy, we found no reported cases of an abdominal pregnancy, located in the posterior cul-de-sac, successfully treated with laparoscopic resection. As shown in the previously cited cases,

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most of the reported abdominal pregnancies were attached to the external surface of the uterus or adnexa although other locations were also reported [1, 4-6].

Although there are still only a few reported cases, the authors believe that properly selected early first trimester abdominal pregnancies can be managed with laparoscopic resection.

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