CASE REPORT

Successful laparoscopic management of primary abdominal pregnancy

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Overall, ~1% of ectopic pregnancies are abdominal pregnancies, which can be life-threatening even when surgical intervention with laparotomy is performed. We present a case in which abdominal pregnancy was successfully managed by operative laparoscopy. A 25 year old Japanese woman presented 6 weeks after her last menstruation with elevated basal body temperature, lower abdominal pain, and light vaginal bleeding. The urinary human chorionic gonadotrophin (HCG) concentration was 2137 IU/l, and laparoscopic findings (i.e. the implantation site was the posterior serosa of the uterus with normal adnexae) established a diagnosis of primary abdominal pregnancy. The gestational product was completely removed by laparoscopic surgery with no uncontrollable loss of blood. The urinary concentration of HCG declined rapidly and the patient made an uneventful recovery. Operative laparoscopy is a safe alternative for the management of appropriately selected patients with early abdominal pregnancy.

Key words: ectopic pregnancy/laparoscopic surgery/primary abdominal pregnancy

Introduction

Abdominal pregnancy, although rare, is associated with a maternal mortality ~8 times higher than that associated with tubal ectopic pregnancy (Martin et al., 1988). Considering the increase in the incidence of ectopic pregnancy in recent years and the fact that 1% of ectopic pregnancies are abdominal (Atrash et al., 1987; Costa et al., 1991), a greater awareness of the clinical features and management of abdominal pregnancy is required. Laparoscopy has gradually replaced laparotomy as the surgical procedure of choice for managing ectopic pregnancy (Silva, 1988), although its effectiveness in diagnosing and treating abdominal pregnancy is not well defined. We present a case of primary abdominal pregnancy diagnosed at 6 weeks gestation that was treated successfully by laparoscopic surgery.

Case report

A 25 year old Japanese woman, gravida 0, para 0, presented 6 weeks after her last menstrual period complaining of pain in the lower abdomen and slight vaginal bleeding. She had undergone no previous surgical procedure, and was not an infertility patient. Her basal body temperature (BBT) had been elevated for the preceding 4 weeks. She had mild tenderness in the lower abdomen. Physical examination revealed a slightly tender, normal-sized uterus, and the adnexae were not tender bilaterally. The urinary human chorionic gonadotrophin (HCG) concentration was 2137 IU/l. Transvaginal ultrasonographic scanning demonstrated an empty uterus with an endometrium 15 mm thick. A hyperechoic mass (60×40×40 mm) was observed in the pouch of Douglas with a small amount of free fluid. The adnexae appeared normal bilaterally.

The suspected diagnosis included tubal abortion and abdominal pregnancy. Dilatation and curettage was initially performed but no trophoblastic tissue was found in the uterine cavity. Diagnostic laparoscopy was then performed using a dual-puncture technique. Standard surgical techniques were used with a camera and monitor setup. The uterus appeared normal and the adnexae were also normal bilaterally. No bleeding was observed from the fimbriae bilaterally. From the pouch of Douglas ~50 ml of old blood was aspirated. The gestational product with adherent blood clot, which was affixed to the posterior surface of the uterus (Figure 1), was carefully and thoroughly removed with dissecting forceps and sent for histological examination. Moderate active bleeding occurred at the implantation site during the dissection procedure, which was controlled by electrocauterization using bipolar forceps. The pelvis was irrigated with 2 l of saline at the end of the procedure.

A rapid decrease in the HCG titre postoperatively confirmed the resolution of the pregnancy. The patient was discharged 72 h postoperatively. Histological assessment of the tissue confirmed the presence of chorionic villi, thus confirming the diagnosis of an abdominal pregnancy.

Discussion

The majority of abdominal pregnancies are secondary, resulting from the reimplantation of a tubal abortion or the expansion of an area of implantation through a ruptured tube (Hallatt and Grove, 1985). The first criterion of Studdiford (1942) for the diagnosis of primary abdominal pregnancy requires that both tubes and ovaries be normal with no evidence of a
Laparoscopic treatment of abdominal pregnancy

Figure 1. Laparoscopic view of primary abdominal pregnancy
O = ovary, T = Fallopian tube, U = uterus; G = gestational product adherent to the posterior serosa of the uterus

recent or remote injury. The diagnosis of primary abdominal pregnancy in the present case was confirmed by the appearance of normal adnexa and the absence of tubal damage or bleeding. Following resection of the extraterine pregnancy, HCG concentrations declined rapidly into the non-pregnant range.

Laparoscopy has been shown to be safe, effective, and more economical than laparotomy for the treatment of ectopic pregnancy and is associated with a faster recovery. It has gradually replaced laparotomy as the surgical procedure of choice for ectopic pregnancy (Silva, 1988). However, an abdominal pregnancy can be life-threatening even when treated with laparotomy as massive, sometimes uncontrollable, bleeding can occur from the implantation site (Atrash et al., 1987).

There are only few reports in the literature concerning the effectiveness of laparoscopy in the diagnosis and treatment of abdominal pregnancy (Abossolo et al., 1994; Ben-Rafael et al., 1995; Dover and Powell, 1995). This is the fourth report in a series of successful laparoscopic resection of an early abdominal pregnancy. Dover and Powell (1995) recently reported a case of a possible primary abdominal pregnancy for which the laparoscopic procedure was used. However, the clinical features and subsequent operative findings including uterine anomaly and malpositioned ovary can make this condition difficult to diagnose (Persad and Dwarakanath, 1996). In their case, the majority of the gestational product was removed laparoscopically from the surface of the ascending colon, leaving a small remnant of organized clot at the site because of the risk of colonic perforation and active bleeding.

In the present case, the gestational products and blood clots were resected laparoscopically with controlled haemostasis. These results indicate that an abdominal pregnancy can be treated successfully by laparoscopic surgery if the diagnosis is made at early gestation and when the site of implantation does not involve a vascular area such as the surface of the colon. While the appropriate treatment of an abdominal pregnancy at early gestation has not been established, laparoscopic surgery can be recommended for cases similar to the one presented here. The collection and evaluation of data concerning the outcomes of such cases would be useful in identifying the optimal mode of laparoscopic treatment.

References

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Received on July 9, 1996, accepted on September 12, 1996