

OVARIAN ABSCESS FOLLOWING CESAREAN SECTION. A CASE REPORT AND REVIEW OF LITERATURE

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Summary: Ovarian abscess is presented although such a finding is an unusual gynecologic complication. It is difficult to distinguish from a tubo-ovarian abscess. Its presence may be suspected in a patients after surgery, carrying IUD, having intraperitoneal infection and pregnancy. If an abscess is present, a tuboovarian abscess is much more common, except in pregnancy. For the last 110 years only 120 cases of ovarian abscesses have been reported in the Literature.

INTRODUCTION

Ovarian abscess – a rare gynecologic complication – results from a primary infection of the ovarian tissue, in contrast with the tuboovarian abscess which involves the ovary by secondary spread from the infected fallopian tube. Since 1869 a total of 120 cases of ovarian abscesses have been reported. Of which 39 were postoperative^(1, 11, 12, 21, 22), 12 cases associated with pregnancy^(2, 4, 6, 7, 16, 18), 12 cases associated with Intrauterine Device^(9, 15, 16, 17) and 57 cases of miscellaneous causes. We here report a recent postoperative case of ovarian abscess diagnosed by ultrasonography.

CASE REPORT

S. D. a 23 year-old woman, gravida 1, para 1 was admitted because of right abdominal pains and fever up to 38°C. She had undergone a lower segment cesarean section 12 days before admission, due to breech presentation and no progress of labor. Adnexa and abdominal inspection, during cesarean section were normal and the postoperative course was uneventful. She was discharged on the 6th postoperative day. On admission, right abdominal tenderness with no rebound or defense was observed. A well delineated, tender and mobile mass of 8 cm in diameter was detected below the umbilicus and to the right side. On pelvic examination the cervix was normal with no abnormal discharge, the uterus was well involuted without tenderness. The right abdominal mass was palpable, high above the true pelvis and was originally

thought to be of a non-gynecologic origin. Abdominal X-ray was normal, ruling out a foreign body. On ultrasound examination, a right multilocular ovarian semisolid mass, 4.5 × 6 cm in size was observed with septa (fig. 1). Blood count showed leucocytosis of 13,000. On laparoscopy a right elongated ovary of 6 cm diameter was adherent to the salpinx cecum and appendix. The ovarian mass was punctured during the manipulations, which resulted in drainage of pus. The left adnex was normal. On laparotomy right salpingo-oopherectomy appendectomy were performed. The left adnex was normal. The postoperative course was uneventful and body temperature returned to normal following antibiotic therapy. Pathologic examination showed an ovarian abscess. On histologic examination the abscess wall contained granulocytes (fig. 2). The external walls of the tube and appendix showed an inflammatory reaction.

DISCUSSION

The major etiologies for ovarian abscess are: access of bacteria from the operative area into the stroma after trauma to the ovarian capsule (operative, ovulation, rupture of ovarian cyst, etc.) and hematogenous or lymphatic spread of bacteria into the ovarian stroma. The bacteria which colonizes the operative area may invade the ovary after the capsular integrity is broken by minute trauma at the time of surgery or by ovulation shortly after surgery. Ovarian cystectomy, wedge resection or other conditions which seed the peritoneum with bacteria would also give

penetration of microbes into the ovarian stroma.

An ovarian abscess usually contains mixed bacterial flora including anaerobes,

anaerobes, aerobic gram negative, gram positive organisms⁽¹⁷⁾ and actinomyces has been also identified^(14, 19).

Leger *et al.*⁽¹¹⁾ found a ratio of one abscess for every 89 vaginal hysterectomies in women over 40 as opposed to one abscess per 19.8 in women under 40 (including all kinds of abscesses), suggesting that greater vascularity in the premenopausal pelvis presumably accounts for the increased morbidity. They also stressed that improper surgical technique may contribute to serious pelvic infection.

Pederson and Vinata⁽¹⁹⁾, Niebyl *et al.*⁽¹⁷⁾ and Harrison⁽¹⁰⁾ in reporting the presence of ovarian abscess in women carrying IUD, suggested that the IUD caused colonization of the endometrium, from where the bacteria proceed into the peritoneal cavity, eventually gaining access to the ovarian stroma at ovulation.

Bilateral ovarian abscesses have been reported^(3, 21, 22) which can offer blood-born or lymphatic dissemination are an etiology for ovarian abscess. Black⁽³⁾ reported in 1936 an ovarian abscess after tonsillitis and acute peritonitis. Soloff⁽²⁰⁾ has reported an ovarian abscess after typhoid.

Ovarian abscesses do occur during pregnancy, where there is no ovulation. It is possible that a slow growing abscess however antidotes conception. The corpus luteum in pregnancy may be susceptible to infection⁽²⁾ especially if blood is present to act as a culture media. However, on histologic examination the acute inflammation makes exact microscopic cellular identification difficult. The abscess wall contains granulation tissue in its early phases and later contains fibrotic tissue⁽¹⁸⁾. Endosalpingitis is minimal, tubal folds are preserved and tubal mucosa shows little infiltration by polymorphonuclear leukocytes. Other pelvic organs usually show surface inflammation only. Niebyl *et al.*⁽¹⁷⁾ performed total abdominal hysterectomy and bilateral salpingo-oophorectomy



Fig. 1. — Ultrasound transverse sector scan, right ovarian semisolid mass of 4.5 cm diameter with septa.

Fig. 2. — Ovarian walls' infiltrated by granulocytes (H. & E. $\times 128$).

on two ovarian abscess patients; the contralateral tube and ovary showed, on histological examination, perisalpingitis and perioophoritis.

Clinically the unruptured ovarian abscess is more difficult to diagnose. It presents, with abdominal pain, a history of an arousing event, some gastro-intestinal symptoms, recent surgery, presence of an IUD, pregnancy or some intraabdominal or widespread infection.

The age of patients reported has been 16 to 44 years. Presentation after surgery has occurred 6 to 133 days postoperatively. Leger *et al.* ⁽¹¹⁾ reported an average of 16.1 days after vaginal surgery and 79.5 days after abdominal surgery.

The temperature is usually elevated, physical examination shows some abdominal tenderness. Pelvic examination can be benign but some tenderness is usually reported, unlike others ⁽¹³⁾ we found a distinct mass. Ultrasound may be helpful and we think that laparoscopy is needed for the diagnosis.

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