

RUPTURED TUBO-OVARIAN ABSCESS IN A POSTMENOPAUSAL WOMAN PRESENTING WITH SEPTIC SHOCK: A CASE REPORT AND LITERATURE REVIEW

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SUMMARY

Objective: To report a case of a ruptured tubo-ovarian abscess which induced septic shock in a postmenopausal woman.

Case Report: A 53-year-old postmenopausal woman was transferred to our emergency department for drowsiness, hypotension, and lower abdominal discomfort. Transabdominal sonography and computed tomography showed a large pelvic tumor over the left adnexa with some ascites. The uterus and other adnexa were unremarkable. Laboratory data, including blood count and electrolytes, showed leukocytosis and azotemia. Under suspicion of a ruptured adnexal tumor, laparotomy was performed and showed a large ruptured tubo-ovarian tumor arising from the left adnexa with intra-abdominal pus formation. Subtotal hysterectomy and bilateral salpingo-oophorectomy led to massive bleeding during manipulation of the left adnexa because of the necrotic change in the left infundibulopelvic vessels. Deep vein thrombosis and wound disruption occurred after the operation, but, fortunately, she recovered 1 month later.

Conclusion: Tubo-ovarian abscesses in postmenopausal women are uncommon but should be kept in mind with a pelvic tumor accompanied by septic shock, as this may cause a terrible outcome and other sequelae. [*Taiwanese J Obstet Gynecol* 2006;45(1):89-91]

Key Words: septic shock, tubo-ovarian abscess

Introduction

Tubo-ovarian abscesses are not uncommon problems in reproductive-age women. This is partly due to the lack of understanding of the etiology and natural history of the disease. This condition is best managed with a multidisciplinary approach. In recent years, the emphasis in clinical management has tended towards psychosocial or psychosexual involvement after organic disease has been excluded [1].

Case Report

A thin 53-year-old postmenopausal woman, with a body mass index of 20, was transferred to our emergency department for drowsiness, hypotension, and lower abdominal discomfort. Tracing her history, she had had no systemic disease except for mild hyperglycemia. She felt generalized weakness and lower abdominal discomfort and had been treated for an upper respiratory infection at a local hospital. After abdominal computed tomography showed a large pelvic tumor with some ascites, she was transferred to our hospital for further evaluation.

The patient had generalized weakness, hypotension (80/40 mmHg), and sinus tachycardia (120 bpm) when she arrived at our emergency department. Abnormal laboratory data were: granulocytosis, 81% (normal, 45-70%); blood urea nitrogen, 38 mg/dL (normal, 6-22 mg/dL); creatinine, 3 mg/dL (normal, 0.6-1.3 mg/

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dL); prothrombin time/activated partial thromboplastin time, 16/54 (normal control, 11.9/35); and C-reactive protein, > 250 mg/L (normal, < 6 mg/L). Pelvic film showed an increase in pelvic density and an intra-uterine device (IUD) in the uterine cavity, and gynecologic ultrasound showed a left adnexal tumor about 10 cm in size with heterogenous contents and some ascites. The contralateral adnexa and uterus looked unremarkable. Under suspicion of a ruptured ovarian tumor inducing hypotension, emergency laparotomy was performed.

During the operation, a large ruptured tumor arising from the left adnexa was seen, with much intra-abdominal pus formation and severe intra-abdominal adhesion. The patient underwent subtotal hysterectomy with bilateral salpingo-oophorectomy because of severe pelvic adhesion (with total obliteration of the cul-de-sac). However, massive bleeding was encountered during manipulation of the friable adnexal tissue. Blood pressure remained low at an average of 80/50 mmHg, and the urine output was less than 100 mL throughout the operation (about 200 min). The patient could not be extubated after the operation due to poor oxygen saturation, and was admitted to the intensive care unit for further care.

The final histopathologic finding was a left tubo-ovarian abscess. Intra-abdominal culture revealed the presence of *Viridans streptococcus* (aerobic) and *Prevotella* spp. (anaerobic), but no growth was found in blood culture. After sensitivity testing, empiric antibiotics were switched to clindamycin and ampicillin.

Unfortunately, the patient's right lower leg became swollen and edematous on the 6th day after the operation, and deep vein thrombosis was proven by the ultrasonographic findings of multiple thrombotic clots between the left popliteal and femoral veins. Heparin and coumadin were prescribed to prevent further sequelae such as a pulmonary embolism. Wound dehiscence with subcutaneous hematoma and active bleeding occurred after removal of the sutures on the 10th day after the operation (3rd day of anticoagulant therapy), and she was readmitted for closure of the disrupted wound.

After 5 days of antibiotic treatment, the patient was discharged with sutures *in situ*, which were removed 2 weeks later in our outpatient department with no further complications or sequelae. She was well and healthy 5 months after the operation.

Discussion

Pelvic inflammatory disease is common in women of reproductive age, but it is rare in the postmenopausal

period except in women using an IUD. A review of the literature concerning pelvic and abdominal abscesses in the postmenopausal period revealed that postmenopausal uterine bleeding, recent endometrial instrumentation, and a palpable pelvic mass were the most common findings [1].

On admission, however, presenting signs and symptoms are generally not helpful in making a correct diagnosis. Fever and the presence of a pelvic mass and an elevated white blood cell count, without evidence of peritonitis, are frequent findings on admission. Clinical and sonographic findings are usually sufficient to recognize pelvic inflammatory disease in premenopausal women, but in the elderly, the disease may easily be overlooked, largely due to a lack of suspicion [2]. Computed tomography can be helpful when the clinical and sonographic findings are complex or equivocal. However, when the clinical suspicion is low, results can be very difficult to interpret, especially when complicated with peritonitis [3]. Protopapas et al reported that, in premenopausal and postmenopausal women diagnosed with a tubo-ovarian abscess, abdominal pain occurred in 82% and 18% and pyrexia of more than 38°C in 74% and 41%, respectively. Irregular vaginal bleeding and gross ascites were significantly more frequent in postmenopausal women. Conservative treatment of a tubo-ovarian abscess is not recommended during menopause [4].

Escherichia coli, *Bacteroides* spp., and *Klebsiella pneumoniae* are the most frequently encountered pathogens in postmenopausal women with tubo-ovarian abscesses. *Neisseria gonorrhoeae* and *Chlamydia trachomatis*, which are frequently isolated from cervical cultures, are uncommonly isolated from tubo-ovarian abscesses. About 40% of tubo-ovarian abscesses can be treated with antibiotics alone, 18.8% with abdominal surgery, and 32% with surgery and antimicrobial therapy [5].

The gold standard for conservative management of intraperitoneal abscesses is combined antibiotic treatment. A review showed that, in 203 patients treated for pelvic inflammatory disease, the combined regimen of ampicillin, clindamycin, and gentamicin seemed more efficient than cefotetan plus doxycycline or clindamycin plus gentamicin in the treatment of tubo-ovarian abscesses. Cefotetan plus oral doxycycline is the most cost-effective regimen for treating uncomplicated pelvic inflammatory disease, whereas triple antibiotic therapy is the treatment of choice in women with tubo-ovarian abscesses [6].

A common intraoperative complication of surgery is inadvertent bowel injury. Postoperative complications include fascial dehiscence, enterocutaneous fistulae, deep venous thrombosis, and a need for prolonged

ventilatory support. A high index of suspicion is required for early recognition of a postmenopausal tubo-ovarian abscess. Prompt surgical exploration should be done to avoid occult rupture or sepsis [7]. Hoffman et al showed that about 66% of postmenopausal women with tubo-ovarian abscesses may have concomitant pelvic pathology such as genital tract malignancies [8]. An attempt at early recognition and surgical management of tubo-ovarian abscesses is important in postmenopausal women. There is little to be gained by delaying surgical treatment, and the patient is at significant risk of deterioration. In addition, surgical exploration appears to be vital for recognizing and treating a concomitant pelvic malignancy or other pathologic conditions that may be contributing to the abscess [8].

The case we presented here exhibited septic shock and dehydration. Emergency surgical intervention was necessary, and empirical triple antibiotic therapy after the operation was suggested before drug sensitivity information from culture. In addition, the use of intra-abdominal and subcutaneous drains may decrease morbidity when operating on these kinds of patients, especially the obese [9,10].

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