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CASE REPORT

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Pelvic Inflammatory Disease in a Postmenopausal Patient with Bilateral Tubal Ligation

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INTRODUCTION AND BACKGROUND

Pelvic inflammatory disease (PID) is an infection of the upper female genital tract affecting close to a million people in the US each year. It causes endometritis, salpingitis, peritonitis, and sometimes tubo-ovarian abscesses. PID is thought to be caused by infectious microorganisms ascending from lower to the upper genital tract (1). It is most commonly caused by *Chlamydia trachomatis* and *Neisseria gonorrhoea*. The incidence of sexually transmitted disease in U.S. women caused by gonorrhea and *Chlamydia* is 2 to 4 million each year (1). Women suffering from this infection are at higher risk of chronic pelvic pain, ectopic pregnancy, infertility, and unexpected hospital visits. About 250,000 to 300,000 women are hospitalized each year with the diagnosis of PID. More than 150,000 women undergo surgery each year secondary to PID and its complications (2, 3).

PID most commonly affects women age 16 to 25 years old. Approximately 85% of all cases are transmitted sexually. The remaining 15% occur after invasive procedures such as IUD placement and uterine curettage. Risk factors associated to PID include young age at first intercourse, high frequency of intercourse, number of sexual partners, promiscuous partner, a history of STD's, and a history of invasive uterine procedure or surgery. PID is rare in postmenopausal women and in those who had tubal ligation (3).

CASE PRESENTATION

A 58 year old G7P7007, presented to the emergency department with the complaints of acute abdominal pain, fever, and chills. She had been menopausal for four years and had no significant past medical history. She underwent a bilateral tubal ligation 10 years prior to presentation. She had five lifetime sexual partners and no history of STDs. Of note, the patient reported having intercourse with a new sexual partner few days prior to onset of symptoms.

Pain was diffuse in the lower quadrants, non-radiating, constant, and described as intense cramping. She was febrile and tachycardic. The physical exam revealed diffuse lower abdominal tenderness, cervical discharge, and cervical motion tenderness. She had a negative pregnancy test and an elevated WBC with a significant left shift and bandemia. A pelvic ultrasound and CT scan revealed a 3cm right adenexal collection and a small uterine fibroid.

The patient was admitted with the diagnosis of PID with possible tubo-ovarian abscess. She was placed on IV antibiotics. Thirty-

six hours later, she continued to be symptomatic with fever and worsening pain. Her pain became more localized to the RLQ and radiating to her back. The decision was made to take the patient to the operating room for an operative laparoscopy. The findings during surgery included a normal uterus, normal right and left ovaries, and dilated, loculated, and erythematous fallopian tubes. She underwent a laparoscopic total bilateral salpingectomy. Following the surgery, the patient was continued on IV antibiotics and her condition rapidly improved. Her pain resolved, her WBC count returned to normal, and she became afebrile. She was discharged home on hospital day #3 in stable condition and was placed on a 14 days course of oral antibiotics. Of note, cultures for Chlamydia and gonorrhea were read as negative.

On surgical pathology, the fallopian tubes revealed evidence of prior tubal ligation and bilateral intraluminal abscess formation with transmural acute inflammation, edema, and necrosis (pyosalpinx).

DISCUSSION

PID is a predominately reproductive age illness and its highest prevalence is in the 2nd and 3rd decades of life. It is a very uncommon diagnosis in menopause. It is estimated that less than 2% of patients admitted to hospitals for salpingitis and tuboovarian abscess are postmenopausal (4).

Although PID was previously thought to be rare in patients with a bilateral tubal ligation, several studies have shown that it occurs with a surprising frequency. A retrospective chart review done by Abbuhl et al. (1996), showed that 11.7% of patients diagnosed with PID had a history of tubal ligation (5). In this study, women with tubal ligation were more likely to be older, less likely to be admitted to the hospital, and had lower WBC counts (5). Another study showed that 7% of inpatients PID admissions had a history of a prior tubal ligation (6). Vermesh et al (1987), showed that 8% of patients with acute salpingitis had underwent tubal sterilization (7).

The literature reports the incidence of PID to be 7 to 11% in patients with a previous tubal ligation and less than 2% in postmenopausal females making our case presentation unique. To our knowledge, this is the first reported case of a menopausal woman with a history of bilateral tubal ligation diagnosed with PID and bilateral pyosalpinx. A PubMed and Ovid search using "Menopause" AND "Pelvic Inflammatory Disease" AND "Sterilization, Tubal" as keywords yielded zero results.

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