Case Report

Strategic management of post hysteroscopy pelvic abscess

ABSTRACT

This case report details the presentation, diagnosis, and management of a 32-year-old nulligravida who presented with lower abdominal pain, fever, and vomiting for 2 days. The patient had a history of pre-*in vitro* fertilization hysteroscopy 1 week back and laparoscopic ovarian cystectomy and ovum pickup in the past 5 months. Initial examination revealed severe tenderness in the left iliac region and an ill-defined mass in the left adnexa. Ultrasound and magnetic resonance imaging confirmed left ovarian endometriotic cysts with bilateral kissing ovaries. Conservative management with antibiotics and symptomatic treatment stabilized the patient, but subsequent laparoscopy revealed extensive bowel and omental adhesions, resulting in a frozen pelvis. Adhesiolysis and drainage of a pus-filled abscess were performed. Postoperatively, the patient recovered well and was discharged on the third postoperative day. Follow-up transvaginal ultrasound after 1 month showed no evidence of pelvic collection. This case underscores the importance of considering potential complications following hysteroscopy, especially in patients with a history of pelvic surgeries, and highlights the successful management of a complex clinical scenario involving pelvic abscess and frozen pelvis.

Keywords: Adhesiolysis, laparoscopic ovarian cystectomy, tubo-ovarian abscess

INTRODUCTION

Postoperative infection after hysteroscopy is uncommon. However, patients who have a history of pelvic inflammatory disease (PID) appear to be at risk of developing such infections, including tubo-ovarian abscesses (TOA). TOA is an inflammatory mass involving the fallopian tube, ovary, and occasionally other adjacent pelvic organs (e.g., bowel and bladder). TOA most commonly occurs in women of reproductive age. Upper genital tract infections and acute or chronic PID are the primary causes in most cases. Classically, a TOA manifests with an adnexal mass, fever, elevated white blood cell count, lower abdominal-pelvic pain, and/or vaginal discharge. However, presentations of this disease can be highly variable. If abscess ruptures, life-threatening sepsis can result. TOA may require more prolonged intravenous antibiotics and hospitalization. Typically, management consists of antimicrobial therapy with surgery reserved for cases with a poor response to antibiotics or for cases with suspected TOA rupture.

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CASE REPORT

We present a case of a 32-year-old nulligravida who came with a complaint of posthysteroscopy lower abdominal pain associated with fever and vomiting for 2 days, bowel and bladder habits are regular. Menstrual cycles are regular and normal. She is planning for *in vitro* fertilization (IVF), so underwent pre-IVF hysteroscopy at a hospital 1 week back and had a history of laparoscopic ovarian cystectomy 5 months back and ovum pick up 2 months back. She had high-grade fever with other vital signs within normal limits, and an abdominal examination revealed severe tenderness

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in the left iliac region. Speculum examination revealed cervix and vagina healthy. On pelvic examination, the uterus was anteverted, bulky, tender, and nonmobile, and an ill-defined, tender, and firm mass of around 7 cm × 5 cm was palpated in the left adnexa with limited mobility. There was severe tenderness in all forniceal regions.

Ultrasound revealed left ovarian endometriotic cysts of size 75 mm × 75 mm and 58 mm × 55 mm with bilateral kissing ovaries. Her total leukocyte count was 22,300/uL. Magnetic resonance imaging reports suggestive of a bulky uterus with endometriotic cysts in the left adnexa. The patient was started on conservative management with higher antibiotics, antipyretic, and symptomatic treatment. The patient got stabilized after 48 h and discharged with a course of antibiotics. After 1 week, she is taken up for laparoscopy and proceeds with a differential diagnosis of to mass or endometriotic cyst. Laparoscopy findings revealed extensive and dense bowel and omental adhesions to uterus and bilateral adnexa obliterating postoperative day (POD) resulting in a frozen pelvis [Figure 1]. Adhesiolysis was done and the bowel was separated from uterus and adnexa. During the process, huge pocket of pus drained from POD. There was another 7 cm × 6 cm thick-walled abscess mimicking ovarian cyst [Figures 2 and 3]. Left adnexa presents posterior to abscess with no clear demarcation [Figure 4]. Abscess drained out and thorough irrigation done [Figure 5]. The right ovary was normal, right tube unhealthy. Bowel integrity was checked and found intact. Drain kept. Postoperative period was uneventful; the patient got discharged on the 3rd POD in stable condition. Follow-up advised and transvaginal ultrasound was done after 1 month. There was no evidence of collection in the pelvis [Figure 6]. Treatment of PID primarily should be with antibiotic; however, if there is no response in 3 days or the clinical diagnosis remains unclear further management of laparoscopy has to be considered for both diagnostic and therapeutic purpose.

Figure 1: Frozen pelvis with dense adhesions

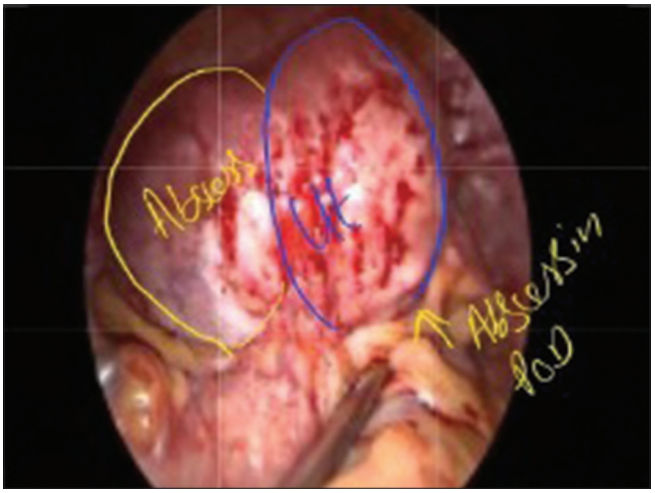

Figure 2: Pictoral depiction of uterus and adjacent abscesses

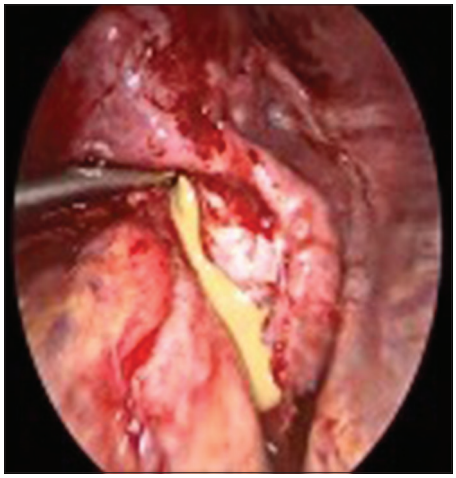

Figure 3: Draining of pus from pelvic abscess

DISCUSSION

Infection following hysteroscopic surgery is uncommon and has been estimated to be occurred in 0.18%–1.50% of cases.[1] A practice bulletin of the American College of Obstetricians and Gynecologists suggests that antibiotics are of no value in general patients undergoing hysteroscopic surgery.[2] However, prophylactic antibiotics are commonly used for hysteroscopic surgery. The risk of posthysteroscopy infection increases in patients with known risk factors, such as nulliparity, active bacterial vaginosis, previous pelvic surgery, multiple sexual partners, or history of PID.[3,4] TOA is most frequently induced by ascending infection through the uterus due to *Neisseria gonorrhoeae*, chlamydia, *Escherichia coli*, or indigenous bacteria of the vagina and cervix, and it usually follows PID.[5,6] Clinical signs of TOA such as lower abdominal tenderness, abnormal vaginal or cervical

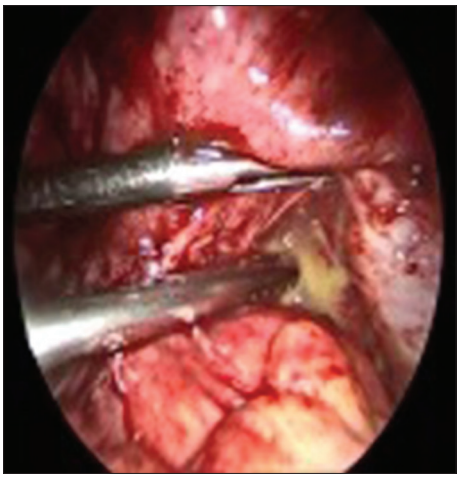

Figure 4: Abscess in the left adnexa

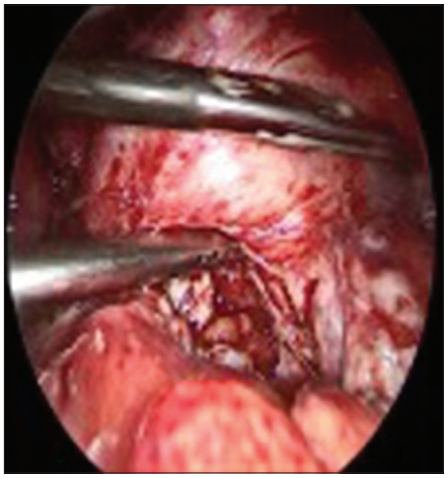

Figure 5: Adhesiolysis

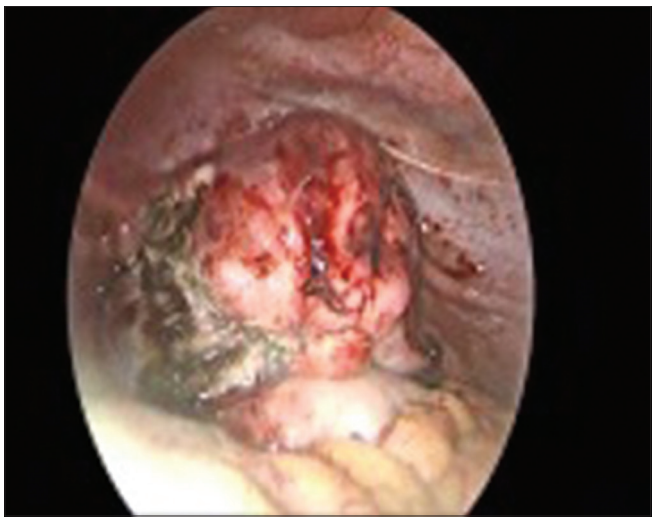

Figure 6: Postadhesiolysis final picture

discharge, fever, abnormal vaginal bleeding, dyspareunia, cervical motion tenderness, and adnexal tenderness[7,8] and laboratory investigations such as the presence of excess leukocytes and/or C-reactive protein.[9] The management of TOA is a fundamentally conservative treatment with systemic broad-spectrum antibiotics. However, a TOA can have serious and potentially life-threatening consequences when there is a risk of abscess rupture. In such cases, antibiotic therapy is not sufficient for treating the TOA, and surgical drainage must be performed.[7,10,11]

In the present case, even though the patient had diagnostic hysteroscopy, with a previous history of surgery and with ongoing infertility treatment (ovum pick up) Scan endometriotic cyst, high index of suspicion of PID with TOA suspected as she presented with typical signs and symptoms of to mass and with leukocytosis. In our experience, the diagnosis of pelvic abscess should be a clinical one. Imaging is prone to subjective variation and should be correlated clinically. Treatment of TOA is important to avoid complications such as life-threatening abscess rupture and sepsis and to preserve fertility, so early detection and treatment of TOA can prevent such adverse outcomes. Hence, in the present case, the patient was started on antibiotics and symptomatic treatment and taken up for laparoscopy and proceed after conservative management.

CONCLUSION

Timely intervention of laparoscopy offers the possibility to diagnose and manage PID safely and prevents complications and often preserves the patient's fertility. Early intervention also can pose problems such as unnecessary bowel injuries. One should rely on clinical findings as imaging technology may mislead the diagnosis sometimes.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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