Urine Retention and Unilateral Vulvar Edema after Laparoscopic Tubal Sterilization

Mehad H. Alqasem, MBBS; SBOG*

We aimed to report a rare case of urine retention and unilateral vulvar edema that occurred after laparoscopic tubal sterilization. A 41-year-old woman underwent laparoscopic bilateral tubal sterilization using Filshie clips at the Maternity Hospital, Abha City, Saudi Arabia. She was discharged 4 hours after surgery, with no complaints. However, 24 hours later, the patient was readmitted to the hospital with urine retention and profound swelling of the left labia majora. Abdominal ultrasound revealed no free fluid. Foley's catheter was inserted, bed rest was advised, ice packings were applied to the vulva and nonsteroidal ant-inflammatory drugs were administered. After 24 hours, the swelling improved, and 48 hours later, the catheter was removed. The patient was discharged. One week later, the vulval swelling resolved completely, and she had no further complications.

Keywords: Case report, Laparoscopy, Vulvar swelling, Urine retention, Postoperative complications

INTRODUCTION

Sterilization is a permanent method for birth control. It is the most popular form of birth control worldwide. Sterilization by laparoscopy is associated with low risk of complications. The most common complications are those related to general anesthesia. There is a risk of injury to the bowel, bladder, or a major blood vessel. If an electric current is used to seal the fallopian tubes, there is a risk of burn injury to the skin or bowel. Other risks include bleeding from the incisions made in the skin and infection[1].

CASE PRESENTATION

In January 2020, a 41-year-old woman, came to Abha Maternity Hospital, Saudi Arabia, for permanent sterilization. She completed her desired family size, with six normal deliveries, the last was three months earlier. She is not known to have any medical disease, apart from laparoscopic cholecystectomy five years earlier.

After complete evaluation, we scheduled her for one-day elective laparoscopic tubal sterilization. At the operation, the woman was placed in the lithotomy position, under general anesthesia, the bladder was emptied with catheter, and a manipulator was introduced through the vagina to manipulate the uterus during procedure. A sharp Veress needle was blindly inserted to the abdominal cavity at the umbilicus, followed by carbon-dioxide insufflation. One 10-mm trocar was introduced through the umbilicus for the camera telescope, one 5-mm trocar was introduced in the abdomen 3 cm above the pubis. After thorough inspection of the pelvis and the peritoneal cavity, no adhesion was found, bilateral tubal sterilization was performed using Filshie clips. All ports were sutured, and the surgery was completed with no complication and the patient was stable. Four hours postoperatively, the patient was evaluated. She had no complaint and was routinely discharged from the hospital.

However, 24 hours later, the patient came back to the hospital complaining of urine retention. Physical examination revealed profound swelling of the left labia majora without evidence of trauma, infection, erythema, or rash. She was vitally stable. Abdominal ultrasound revealed no free fluid.

The patient was re-admitted to the hospital. Foley's catheter was inserted, bed rest was advised, ice packings were applied to the vulva and nonsteroidal ant-inflammatory drugs were administered. After 24 hours from the conservative management, the swelling improved, and 48 hours later, the catheter was removed, as she was able to pass urine. The patient was discharged from the hospital with an appointment after one week. Examination at the outpatient clinic revealed that the vulval swelling resolved completely, and she had no further complications.

DISCUSSION

Our patient developed profound edema of the left labia majora, one day after undergoing laparoscopic permanent sterilization. At the 20th Annual Meeting of the American Association of Gynecologic Laparoscopists in 1993, a list of 4,400 laparoscopic cases was presented, and vulvar edema was referred to as a possible complication[2]. The first description of this complication was made in 1996[3]. In three women who underwent operative laparoscopy for ovarian cystectomy, pelvic adhesions, and oocyte retrieval for Gamete Intra-Fallopian Transfer (GIFT), respectively. Vulvar edema developed within 24 hours postoperatively. In all three cases the management was conservative, with Foley urethral catheter because of inability to void, ice packs, and bed rest, and the condition resolved in 1–3 days, allowing for discharge from hospital.

This complication could be attributed to an escape of irrigation fluid (i.e., lactated Ringer's), either intra operatively or postoperatively through a supra pubic puncture site, which might then have traveled through the subcutaneous tissue to the vulva, the most dependent and accessible area. This vulvar edema is self-limited but that requires hospitalization owing to the patient's inability to void[2,3].

The mechanism of the leakage of fluid into the vulvar region could be a fistulous tract originating in a lower trocar puncture wound and dissecting downward subcutaneously by the force of gravity[3,4]. The formation of a fistulous tract has also been suggested in post-paracentesis vulvar edema in women with ascites of hepatic origin, or ovarian hyper- stimulation syndrome[5]. Most cases reported for similar conditions were secondary to used 4% icodextrin in an effort to prevent adhesion formation[6-7].

* Assistant Professor
Department of Obstetrics & Gynecology, College of Medicine, King Khalid University
Saudi Arabia
E-mail: Mehad.q@Gmail.com

CONCLUSION

Vulvar edema is an unpredictable and rare complication of operative laparoscopy. It can be treated with conservative management. However, further studies are needed to explain relationship between vulvar edema and laparoscopic surgery.

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