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Case Report

Pyometra Following Le Fort Colpocleisis

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Abstract: The Le Fort colpocleisis is an obliterative procedure used in the treatment of pelvic prolapse in elderly women where prolonged reconstructive surgery or general anesthesia may be medically contraindicated. Advantages include the ability to perform this procedure quickly under regional anesthesia with a low postoperative complication rate. The authors describe a previously unreported complication of partial colpocleisis requiring subsequent hysterectomy. A 92-year-old woman presented with a 10-day history of lower extremity edema and pelvic pain. She had recently undergone a second partial colpocleisis for recurrent pelvic prolapse in which the drainage channels were partially obliterated. Radiologic evaluation revealed an enlarged complex pelvic mass. At the time of laparotomy, an enlarged uterus filled with purulent material was noted which necessitated subsequent hysterectomy. It was concluded that, although uncommon, postoperative infection is a recognized complication of Le Fort colpocleisis. To minimize the chance of abscess, adequate lateral channels should be created and maintained during colpocleisis to allow drainage of postoperative secretions, bleeding and inflammatory exudate.

Keywords: Colpocleisis; Pelvic prolapse; Pyometra

Introduction

In 1992, 14% of the population in the United States was over the age of 65. This is expected to increase to 20% by the year 2000, and it is estimated that there will be 11.4 million women over the age of 85 by the year 2050 [1]. With greater numbers of females living into their eighth and ninth decades, physicians will see more patients with pelvic prolapse, often with coexisting severe medical conditions. For women who fail conservative therapy with pessaries and require surgical correction, numerous surgical techniques for the treatment of advanced pelvic prolapse have been described. The Le Fort colpocleisis is a quick and effective obliterative procedure which may be ideal for a woman who does not wish to preserve sexual function and is considered a poor surgical risk. Studies have shown the Le Fort colpocleisis to have good long-term results and a low complication rate [2–6]. We present a rare complication of Le Fort colpocleisis which resulted in pyometra and subsequent hysterectomy.

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Case Report

A 92-year-old white woman was initially referred to our office for evaluation of pelvic prolapse. She reported a 7-year history of increasing pelvic pressure and a mass protruding from the vagina. She denied any urinary incontinence or voiding difficulty. Her past medical history was significant for severe coronary artery disease and hypertension. On physical examination she was noted to have complete uterine procidentia. Office cystometry was negative for stress urinary incontinence. Initially treated with vaginal estrogen supplementation and a ring pessary, the patient experienced minimal symptomatic improvement over the next 3 months and decided to undergo surgical correction of her prolapse. After consultation with her cardiologist and a negative endometrial biopsy, she underwent an uncomplicated Le Fort colpocleisis and Kelly plication of the bladder neck under local anesthesia.

Postoperatively, she experienced complete resolution

of her symptoms and was noted to have good reduction of her prolapse. Eight months later she returned with complaints of recurrent pelvic pressure, but denied any abnormal bleeding or discharge. Physical examination revealed a large anterior wall prolapse originating distal to the obliterated portion of the vagina and protruding beyond the hymen. No obvious vaginal ulcerations were noted. Management options were discussed, and the patient requested a second surgical correction. She subsequently underwent a repeat distal colpocleisis and partial colpectomy under local anesthesia. Because of anatomic distortion and scarring from the previous surgery, it was difficult to maintain an adequate caliber of the lateral mucosal drainage canals. The postoperative course was uncomplicated and the patient was discharged on postoperative day 3.

Four weeks later, she presented to the emergency room with a 10-days history of progressively worsening bilateral lower extremity edema and suprapubic pain. She denied any vaginal bleeding or discharge, fever, nausea or vomiting. On physical examination, the patient was afebrile and her abdomen was slightly distended, with mild tenderness in both lower quadrants. There were no peritoneal signs and bowel signs were present. Pitting edema was present in both lower extremities, without signs of palpable inguinal masses or lymphadenopathy. The remainder of the examination was normal. Admission tests revealed an elevated WBC of 21.8 with a significant bandemia. Hematocrit was 30.2% and hemoglobin 10.2 g/ml. Electrolytes were normal. Chest X-ray and ECG were unchanged from the previous baseline studies. Urinalysis and culture were negative.

Pelvic ultrasound revealed a massively enlarged uterus with an echogenic complex mass in the uterine cavity suggestive of an abscess or endometrial carcinoma (Fig. 1). To rule out endometrial cancer, a follow-up CT scan was performed which revealed a large, thick-walled pelvic collection extending to the right lower abdomen. Based on these radiographic findings, surgical and gynecological consultations were obtained and the decision was made to proceed with exploratory laparotomy under general anesthesia.

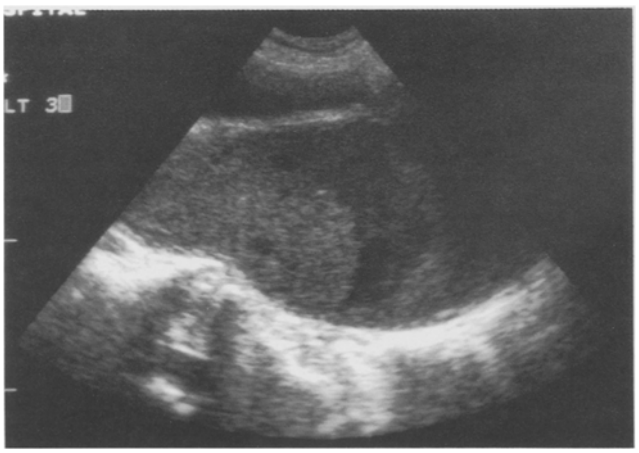

Fig. 1. Pelvic ultrasound (sagittal view) showing enlarged uterus with echogenic complex mass in the uterine cavity.

On entering the peritoneal cavity, pelvic washings were obtained. Abdominal exploration revealed no signs of metastasis or lymphadenopathy, and the uterus was found to be edematous and enlarged, filling the entire pelvis. In an attempt to decompress the enlarged uterus and to facilitate visualization of the operative field, a 50 ml syringe with an 18 gauge needle was inserted through the uterine fundus and 250 ml of purulent material drained from the endometrial cavity. To minimize operative morbidity, a supracervical hysterectomy was then performed. Intraoperative pathologic evaluation of the uterus revealed acute inflammation and no evidence of malignancy. Purulent material was noted to have dissected to the distal vagina, making perforation and placement of a drain technically feasible. After abdominal and vaginal palpation, the closed vagina was perforated in the midline distal to the previous repair to allow placement of an intravaginal drain, and an intra-abdominal drain was placed prior to abdominal closure.

Postopertively the patient was continued on intravenous antibiotics. She also received one unit of packed red blood cells for postoperative anemia. The remainder of the postoperative course was uneventful. Postoperative rehabilitation was prolonged and required intensive physical therapy and occupational therapy. The patient was transferred on postoperative day 12 to a rehabilitation unit in stable condition.

Discussion

The Le Fort colpocleisis has been a controversial technique since it was first introduced by Leon Le Fort in 1877 [2].Although some have criticized it as an obliterative procedure which compromises vaginal coital function and limits evaluation of postmenopausal bleeding, its advocates stress the procedure's many advantages, including choice of anesthetic, reduced operative time, decreased intraoperative blood loss, short recovery period, small risk of significant postoperative complications and low failure rate [3]. For the elderly woman with complete prolapse of the vagina or uterus who is not sexually active and is a poor surgical candidate because of advanced age or coexisting medical conditions, colpocleisis may be an ideal option.

Serious complications following colpocleisis are rare. Studies have reported a postoperative complication rate of 20%–30%, with the most common complications being postoperative urinary tract infection and voiding dysfunction [4–6]. Although low-grade self-limiting febrile episodes following colpocleisis have been reported in 18%–43% of cases, severe infection following colpocleisis is uncommon [4,5]. Possible sources of these low-grade fevers include pyuria, infection of the perineorrhaphy site, inflammatory reaction to the suture material, or infected vaginal ulcers. Some investigators have recommended that such vaginal

ulcers should either be treated preoperatively with topical estrogen or resected at the time of surgery. The possibility of malignancy in the ulcerated area should also be considered, and preoperative biopsy is recommended [3].

The lateral drainage channels described by Le Fort theoretically serve two vital functions. First, they allow identification of postmenopausal bleeding, which may indicate uterine malignancy. Secondly, they serve as drains for certical secretions and postoperative inflammatory exudate. To our knowledge, this is the first case report of a complication secondary to obliteration of these lateral channels. Constriction of the lateral channels in this patient may have prevented adequate drainage of infectious material, which resulted in an ascending infection and an enlarging pyometra. The enlarged uterus in turn compressed the vascular and lymphatic drainage from the lower extremities, resulting in bilateral edema.

Although much attention has been given to development of the midline septum for reduction of the prolapse in the Le Fort procedure, the case presented emphasizes the importance of adopting a technique which also creates adequate lateral drainage canals. Falk [3] calculated that the diameter of the channel will be about one-third the width of the lateral strip of vaginal mucosa, and recommended that this strip be approximately 2–3 inches wide in order to create adequate drainage channels. In an alternative technique described by Ridley [6], an 18 Fr rubber tube is used to facilitate creation of an adequate drainage tract by laying the tube in the canal and placing sutures over it, approximating the anterior and posterior vaginal walls. The rubber tube is removed 7 days later, allowing time for the tract to epithelialize. Careful attention to maintaining the patency of these lateral channels at the time of surgery is important for the drainage of infectious material, cervical secretions and uterine bleeding.

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