

Case report

## Laparoscopic management of fallopian tube prolapse masquerading as adenocarcinoma of the vagina in a hysterectomized woman

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### Abstract

**Background:** Fallopian tube prolapse as a complication of abdominal hysterectomy is a rare occurrence. A case with fallopian tube prolapse was managed by a combined vaginal and laparoscopic approach and description of the operative technique is presented.

**Case presentation:** A 39-year-old woman with vaginal prolapse of the fallopian tube after total abdominal hysterectomy presented with an incorrect diagnosis of adenocarcinoma of the vaginal apex. The prolapsed tube and cystic ovary were removed by vaginal and laparoscopic approach. The postoperative course went well.

**Conclusions:** Early or late fallopian tube prolapse can occur after total abdominal hysterectomy and vaginal hysterectomy. Symptoms consist of persistent blood loss or leukorrhea, dyspareunia and chronic pelvic pain. Vaginal removal of prolapsed tube with laparoscopic surgery may be a suitable treatment. The abdominal or vaginal approach used in surgical correction of prolapsed tubes must be decided in each case according to the patient's individual characteristics.

### Background

Fallopian tube prolapse (FTP) is an unusual complication of both abdominal and vaginal hysterectomies. Sporadic cases have been added to the literature about predisposing factors and techniques of management [1]. The diagnosis of FTP needs postoperative observation and careful examination of the vaginal vault. A biopsy is necessary to differentiate between this lesion and the presence of vaginal granulation tissue. The presence of cellular atypias may result in an unnecessary additional operation. These changes are probably secondary to the severe underlying inflammatory reaction. Vaginal infection, postoperative bleeding, a defective surgical technique, and poor physical condition of the patient are the most important predisposing factors for intravaginal prolapse of the fallopian tube [2]. An excisional biopsy constitutes the definitive diagnostic procedure and adequate treatment for this post-hysterectomic vaginal complication.

We have managed a woman with FTP on combining a simple vaginal approach and laparoscopic total salpingectomy and oophorectomy. The operative technique described in this case with this condition provides the advantages of total salpingectomy without laparotomy.

### Case presentation

A 39-year-old woman, gravida 9, para 8, has been performed a total abdominal hysterectomy and left salpingo-oophorectomy in two years ago for menometrorrhagia. She admitted complaining of vaginal spotting and pain with sexual intercourse of 3 months' duration. Pelvic examination revealed a mass at the apex of the cuff, with an erroneous diagnosis of adenocarcinoma of the vaginal apex. On ultrasonographic examination, the right ovary was cystic appearance in diameter 38 mm × 40 mm. Microscopic examination of a biopsy specimen from the mass revealed the prolapsed fimbrial end of a fallopian tube. Acute and chronic inflammation were present. After

her admission medical and surgical treatment options were discussed with the patient. The right fallopian tube and ovary were removed together with granulation tissue, as described below.

### Methods

Simultaneous vaginal and standard laparoscopic technique with additional puncture in the suprapubic region and at McBurney's point were used because of cystic appearance of the right ovary. These sites were used for the insertion of the bipolar forceps, and laparoscopic scissors. Thick and thin pelvic adhesions were incised, freeing the tube from the pelvic sidewall and minor bowel attachments and mobilizing the mesosalpinx. We made an elliptical incision around the vaginal mucosa and by sharp dissection, freed the tube from vagina after laparoscopic mobilization of the tube and ovary. The tube and ovary were withdrawn through transvaginally when freed from attachments. The pelvic peritoneum and vaginal mucosa were closed. Prophylactic antibiotic was administered.

### Discussion

FTP may cause symptoms serious enough to warrant treatment. The fallopian tube is unlike other abdominal viscera in that it is sensitive to touch, cutting and crushing [3]. Because dense adhesions may involve the tube, ovary, bladder, and bowel, most authors have performed partial salpingectomy [1]. However, total salpingectomy is preferred, for the reason that continued pain by traction on the remaining portion of the prolapsed fallopian tube.

Factors that may contribute to FTP include pelvic infection, poor hemostasis, intraperitoneal vaginal drains or packs, and failure to close the vaginal cuff [1,3]. These may lead to the development of a defect between the pelvic peritoneum and the vagina [1,4]. As has been noted by others, prolapse of the fallopian tube following vaginal or abdominal hysterectomy is probably much more common than the numbers of reports in the literature indicate [3,5]. FTP after vaginal hysterectomy is more common than abdominal hysterectomy [6,7]. However, it was also reported that most cases occurred after abdominal hysterectomies [5].

In present case, because the right ovary was bound by dense adhesions to the right fallopian tube, a right salpingo-oophorectomy was performed. Postoperatively, she did very well and within a few days after surgery, she was pain free. The exact incidence of FTP is difficult to estimate, because cases may go undiagnosed and may resolve before detection. In the present woman, factors associated with development of FTP include grand multiparity and low socioeconomic status. The diagnosis of FTP should be suspected when a red, granular, polypoid mass or lesion is seen at the vaginal cuff protruding into the vagina after

hysterectomy. The differential diagnosis that must be considered includes proliferative granulation tissue related to surgery, malignant lesion. The definitive identification is made by histopathologic examination. In the present case, the pathological result of right fallopian tube and ovary was revealed as tube and cystic ovary with inflammation. Wetchler and Hurt describe their technique for total excision of the prolapsed fallopian tube via the vaginal approach [8]. Letterie and associate operative technique combines a vaginal approach with laparoscopic total salpingectomy [9].

### Conclusions

The described method should be applicable in most clinical circumstances when salpingectomy is indicated, and may be performed on an outpatient basis. This combined technique allows adhesiolysis and full mobilization of the adnexa. However, dense bowel, bladder, and adnexal adhesions that prevent full mobilization of the involved tube often prevent total excision by a laparoscopic approach. Under these circumstances as partial salpingectomy or an abdominal approach must be considered. Following surgery, complete symptom resolution is usually observed and no recurrence has been reported [10].

### Competing interests

None declared.

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