Case Report

Vaginal Vault Rupture with Evisceration of Small Intestine during Coitus

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In 2009, a 41-year-old Thai woman who had undergone abdominal hysterectomy 4 months earlier was admitted because of bleeding per vagina without pain during coitus for 1 day. She had undergone pelvic examination that disclosed small intestine in vagina and scanty bleeding of vaginal vault. Closure of the rupture of the vaginal vault during laparotomy was completed, resulting in satisfactory condition.

Vaginal vault rupture is a rare condition. Prompt surgical and medical intervention are required to prevent complications. Incidence, risk factors, and management for rupture of the vaginal vault that occurs after total abdominal hysterectomy are discussed.

Keywords: *Vaginal rupture, Hysterectomy, Evisceration*

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Vaginal vault rupture is a rare, but potentially morbid complication of total hysterectomy. After rupture of the vaginal vault, abdominal or pelvic contents may be expelled through the vaginal opening. Bowel evisceration can lead to serious sequelae including peritonitis, bowel injury, necrosis, and sepsis. Prompt surgical and medical intervention are required to prevent such complications. The incidence of vaginal vault rupture varies according to surgical approach.

Case Report

A 41-year-old, Para 2-0-0-2 Thai woman who had undergone abdominal hysterectomy 4 months earlier due to chronic pelvic pain was admitted because of bleeding from the vagina without pain during coitus for 1 day. The hysterectomy was done by interrupted suture of vaginal vault with Vicryl no. 1/0 without reperitonization after sharp cutting of vagina. Ceftriaxone 2 gms per day for the first day of post-operation was given. The patient was lost to follow-up at six-week postoperation and had history of vaginitis without any treatment for three times. General physical examination showed a healthy woman with stable vital signs, normal abdominal signs, and essentially normal for systemic examinations. Gynecological examination revealed small intestine in the vagina with a small amount of watery discharge without active bleeding (Fig. 1). At laparotomy, rupture of the vaginal vault without active bleeding was presented, the vaginal vault was 4 centimeters in length and one loop of 12 centimeters in length of ileum protruded into the vaginal canal (Fig. 2). Margin of vaginal vault was thin and blended to the peritoneum. Closure of the rupture of the vaginal vault by six stitches of interrupted suture with Vicryl no.1/0 and reperitonization by continuous suture with chromic catgut no.2/0 were done after reducing the healthy ileum. Intravenous Ampicillin 4 gms per day in the first postoperation day and 2 gms of Amoxycillin per day for six days were given orally, resulting in a satisfactory condition.

The postoperative course was uneventful with no complications and recurrence during the follow-up at six weeks and four months.

Discussion

The reported incidence of vaginal vault rupture varies according to surgical approach, overall incidence after any type of pelvic surgery, total laparoscopic hysterectomy(TLH), total vaginal hysterectomy (TVH), and total abdominal hysterectomy (TAH) are 0.14%,4.93%,0.29%, and 0.12% respectively.

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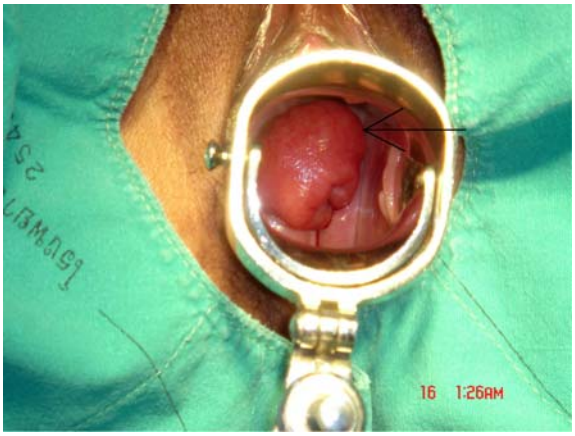

Fig. 1 Evisceration of small intestine in the vagina

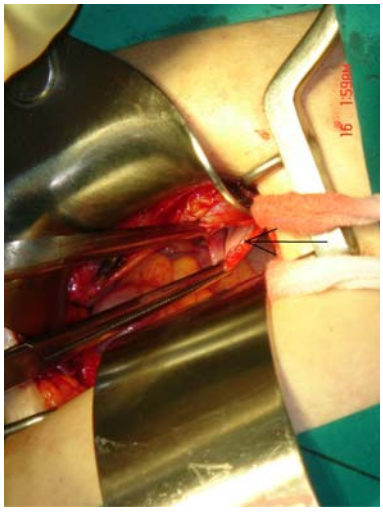

Fig. 2 The rupture of vaginal vault

Relative risks of vaginal vault rupture complication after TLH compared with TVH and TAH are 21.0 and 53.2, respectively[1,2].

Incidence is increased up to 4.1% in cases of robotic simple and radical hysterectomy, trachelectomy, and upper vaginectomy[3].

Vaginal vault rupture most likely occurs in premenopausal women, median age is 39 years[1,2,4-7]. Median time of vaginal vault rupture varies from 6.1 weeks to 57 years after the hysterectomy, depend on the cause of disease[2-4,6,7]. Risks factors of vaginal vault rupture are high speed sport injury, infection of the vagina, or vault and vaginal ring pessary[4,8,9]. The coitus was the triggering event in most of cases[1,3,6,7]. Some cases occurred spontaneously and some cases are related to thermal effect and closure technique during operation[2,3].

Locations of rupture are vaginal vault in case of TAH and apex of vaginal vault in case of TVH[1,7]. Symptoms of case are pain, vaginal bleeding, and abdominal pressure[1,6]. Closure of the vaginal vault rupture can be operated by vaginal or abdominal approach[3]. Recurrence can occur but can be prevented by double closure combined with colpocleisis, colpectomy, sacroplexy, or obliteration of the "cul de sac"[1,3,5]. Postmenopausal women who had hysterectomied should be checked yearly and estrogen therapy to the vagina should be taken[7].

The cause of this case may be due to infection of the vaginal vault because of loss to follow-up with a history of vaginitis and she had no thermal effect during operation.

Conclusion

Vaginal vault rupture and evisceration should be considered in women with a history of hysterectomy presenting with acute vaginal bleeding during coitus. The incidence is low and contributing factors remain unknown but thermal effect, infection, and vaginal closure technique may be responsible. The post operative follow-up should be considered closely in every case of hysterectomy.

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ภาวะช่องคลอดหลังการผ่าตัดมดลูกแตก และมีลำไส้เล็กหลุดออกทางช่องคลอดขณะมีเพศสัมพันธ์

เล็ก นพดลรัตน์กุล

ในปี พ.ศ. 2552 มีหญิงไทยอายุ 41 ปี มีประวัติผ่าตัดมดลูกออกได้ 4 เดือนก่อน มีเลือดออกทางช่องคลอดปริมาณไม่มาก ไม่มีอาการปวดขณะมีเพศสัมพันธ์ 1 วัน ก่อนมาโรงพยาบาล ผ่าตัดทางหน้าท้องพบมีการแตกของช่องคลอดบริเวณแผลเย็บช่องคลอดและมีลำไส้เล็กหลุดออกทางช่องคลอด ได้รับการผ่าตัดทางช่องท้องและเย็บปิดแผลแตกของช่องคลอด ผลการรักษาเป็นปกติ

ภาวะช่องคลอดแตกและมีลำไส้เล็กหลุดออกทางช่องคลอดในผู้ที่รับการผ่าตัดมดลูกออก พบได้น้อย และต้องการการรักษาอย่างรีบด่วนและถูกต้อง ได้อภิปรายถึงอุบัติการณ์ ปัจจัยเสี่ยงและการรักษา