

Vaginal cuff dehiscence with small bowel prolapse 10 years after vaginal hysterectomy

Brandon K. Morehart, MD¹, Denise M. Schumacher, MD², Dennis J. Lutz, MD³

1. University of North Dakota School of Medicine and Health Sciences, Fargo, ND, USA

2. University of North Dakota School of Medicine and Health Sciences, Grand Forks, ND, USA

3. University of North Dakota School of Medicine and Health Sciences, Minot, ND, USA

Abstract

PURPOSE: (1) To describe a case of cuff dehiscence with bowel evisceration ten years after vaginal hysterectomy. (2) To critically review the literature of incidence and risk factors for cuff dehiscence. (3) To propose recommendations for management and prevention.

METHODS: A 74-year-old female, twenty years post-menopausal, presented for vaginal pain and pain across her lower abdomen after feeling something protruding from her vagina. She has a past surgical history of vaginal hysterectomy ten years ago and has since dealt with prolapse requiring use of a pessary. She was fitted with a ring pessary May 2020. She was using a size 4 which was then removed for six months due to ulcerations. In August 2021, she was refitted with a size 3. It subsequently fell out and a donut pessary was placed a week later. Due to ongoing discomfort it was replaced with a ring in December 2021. She has been on 1 mg of oral estrogen daily for several years. She has a past medical history significant for rheumatoid arthritis treated with 4 mg methylprednisolone daily as well as type 2 diabetes mellitus. She has a remote smoking history and quit over 35 years ago.

On exam, she had elevated blood pressure. She was found to have small bowel protruding from her vagina. Additionally, prior surgical incisions from a hip surgery and oophorectomy in 2019 were noted and partially open. Her small bowel was wrapped in sterile gauze soaked in saline and she was transferred to the operating room for exploratory laparotomy.

Approximately 40 cm of distal ileum was reduced back into the peritoneal cavity. No injuries to the bowel were noted and the vaginal cuff appeared relatively avascular. After the edges were trimmed, the cuff was closed with running suture. Additional interrupted sutures were used to prevent recurrent dehiscence.

She remained stable after surgery and was discharged on postoperative day three. She had a follow up appointment one month later and the vaginal cuff appeared surprisingly well healed.

RESULTS: Vaginal cuff dehiscence is a rare but potentially detrimental complication of gynecological surgery. The risk factors for its occurrence are not completely clear due to the low incidence and number of studies. Proposed risk factors include increased age, increased number of vaginal surgeries, post-operative cuff infection or hematoma, increased intra-abdominal pressure (for example, patients with chronic cough), the mode of hysterectomy, and poor wound healing.

Numerous factors can lead to poor wound healing in patients, including poor nutrition, malignancy, or chronic steroid use, as was the case for this patient as evidenced by the cuff dehiscence many years after surgery and poor wound healing of more recent incisions.

There are some studies that have investigated whether the mode of hysterectomy affects the likelihood of cuff dehiscence, although this body of evidence tends to be limited as well. In general, vaginal hysterectomy was the major method that led to cuff dehiscence prior to minimally invasive options. Since then, there is data that indicates options like total laparoscopic hysterectomy (TLH) and robotic hysterectomy are more likely to have cuff dehiscence as a complication. This shift can be attributed at least in part to the increased utilization of these minimally invasive options leading to more reports on their outcomes and not necessarily because there truly is an increased risk of dehiscence with these methods. Other studies have found evidence that TLH has higher rates of cuff dehiscence compared to other methods.

There are some methods during surgery that have been proposed to prevent the occurrence of cuff dehiscence, although not all have convincing evidence. Preventive measures include using suture rather than electrocoagulation to achieve hemostasis, using a two-layer running closure technique, and ensuring adequate edges of tissue to be sutured. The use of barbed bidirectional suture has been shown in previous studies to have significance in reducing the risk of cuff dehiscence.

The method of repairing cuff dehiscence is not universally agreed upon and depends heavily on the accompanying symptoms, whether there is bowel evisceration present, likelihood that there is injured bowel, and appropriate visualization of the vaginal tissue to close the cuff. There is no concrete evidence that vaginal, abdominal, or laparoscopic repair is superior to the other.

CONCLUSIONS: This case presents a rare and possibly unique instance of cuff dehiscence many years after vaginal hysterectomy and complicated by bowel evisceration. Cuff dehiscence, on average, typically occurs much sooner after surgery, but with potential risk factors present it is still a possibility years later. It is beneficial for gynecological surgeons to be aware of the likelihood of this complication, particularly for their patients with risk factors that may require additional follow up postoperatively. Education on signs and symptoms to be aware of should be provided to the patient and may prevent more serious complications, such as bowel evisceration, if able to be diagnosed early.