Case Report

Laparoscopy assisted management of vaginal evisceration

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Abstract

Introduction: Evisceration is an uncommon surgical emergency. A vaginal evisceration is a rare occurrence following hysterectomy. The risk factors of having an evisceration are obesity, sudden increase in intra abdominal pressure, vaginal surgeries and post menopausal age group. This is a case report of a 58 year old lady who presented to the emergency room with evisceration through the vaginal vault. This mandates an early diagnosis of the condition, start the patient on broad spectrum antibiotics on admission and plan emergent surgical intervention. In our case we did a combined vaginal and laparoscopic approach. The use of minimally invasive surgery had saved the patient the morbidity of a laparotomy especially when done as an emergency procedure. The outcome of having managed this patient this way was rewarding.
Keywords: Evisceration, risk factors, hysterectomy, laparoscopy.

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INTRODUCTION

Vaginal evisceration was described by Hyernaux as early as 1864 as a disruption of the wall of proximal vagina resulting in a prolapse of abdominal contents. Most common organ to eviscerate is the small bowel. The etiopathogenesis is different for pre and post menopausal women with majority of cases having multiple risk factors aiding evisceration. There is no adequate data to understand the risk of vaginal vault dehiscence and there is no consensus on the management of this condition.It is important to identify and address these risk factors for a better understanding and complete management of the condition. The management of evisceration has to be tailored to individual patient to achieve the best outcome.

CASE REPORT

A 58yr old woman was brought to the emergency room with prolapsing bowel loops through the vaginal orifice following alleged history of electric shock [fig 1]. She is a diabetic on medication and gives a past surgical history of abdominal hysterectomy done 6 years ago. On examination she was conscious, oriented and haemodynamically stable. Her abdomen was soft; however there was tenderness in the subumblical region. Vaginal examination showed complete prolapse of vag inal vault with vault rupture and evisceration of small bowel loops. The bowel loops were grossly edematous. She was started on broad spectrum antibiotics with anaerobic cover. The eviscerated loops of intestines were promptly wrapped with warm saline soaks. In the operating room patient was under general anesthesia, in head low and lithotomy position. She was planned for Laparoscopy guided reposition of bowel loop along with vault repair. The eviscerated bowel loops, which was about 60 cms in length, were thoroughly washed with warm saline. There was a 2x1cm perforation in one of the bowel loop, which was closed in two layers using polyglactine sutures. An assistant all through the procedure to prevent further edema always supported the bowel loops. Laparoscopic ports were introduced, only to find dense bowel adhesions to the anterior abdominal wall (previous scar) in the lower segment of the abdomen.

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This made visualization of the pelvis difficult. Anticipating such a problem the first port was made higher up than usual in the supra umbilical region and with a steep head low position [fig 2]. Acceptable exposure of the pelvis was attained and we managed to reduce the eviscerated bowel intraperitoneally by using the combined vaginal and laparoscopic approach. The entire length of the eviscerated bowel was placed back intraperitoneally after which the two rents in the vaginal vault [fig 3] were closed with absorbable continuous interlocking sutures [fig 4]. The vault was repositioned with a vaginal pack insitu. Patient was shifted to ICU for overnight observation and management. She was subsequently shifted to ward and discharged on the fourth POD.

Figure 1: Clinical presentation. Complete vault prolapse with eviscerated edematous small bowel loops

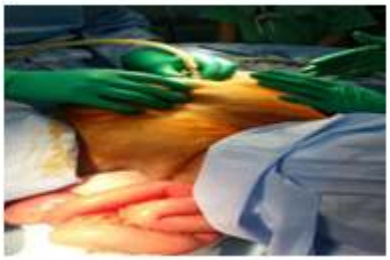

Figure 2: Introduction of laparoscope

Figure 3: Rent in the vault seen after repositioning the bowel loops intraperitoneally

Figure 4: Completed vault closure

DISCUSSION

Vaginal evisceration is not a commonly occurring phenomenon. It is rare and potentially life threatening. The actual incidence of such an event is difficult to ascertain. It is because of the rarity of such a complication, the incidence is low and is difficult to study. In an expert review by Cronin, the rate of vaginal vault rupture ranges from 0.14 to 4.1% [1]. This is however dependent on the type of surgical approach and patient factors. The risk factors of vaginal evisceration are different among pre and post menopausal age groups. Post menopausal women are more vulnerable to have evisceration because of the fact that there may be a preexisting prolapse of the vagina or the vaginal vault following hysterectomy[2,3]. Data on risk factors are limited and conflicting[1]. Even thought it may be scientifically interpreted that age and medical conditions like diabetes may interfere with wound healing, there is no data available to substantiate this view. Elderly women, vaginal surgeries, vaginal atrophy, factors with poor wound healing (including malignancy, chronic steroid use, malnutrition, tissue radiation), increased intra abdominal pressure (chronic cough and constipation), and postoperative vaginal cuff infection or hematoma may be risk factors favoring dehiscence[4]. The timing of dehiscence after hysterectomy is also very variable, it is reported as early as 3 days[5] to as late as 30 years[6] following surgery. So the vault giving way 6 years after surgery in this case is not surprising. There is no data associating obesity as a risk factor for having an evisceration. It is logical to accept however that the intra abdominal pressure in obese individuals is much higher as compared to the normal weight category[7]. This constant increased intra abdominal pressure along with the sudden increase in pressure precipitated in this patient by a fall on her abdomen following the electric shock, was one of the major factors responsible for the evisceration. The associated mortality is around 5.6% which gets worse if the eviscerated bowel is gangrenous[10]. It is of primary importance to assess and diagnose the condition early and plan adequate measures to restore anatomical integrity. Its always expected that

the eviscerated bowel loops are edematous and appear dusky due to venous congestion. This period is very vital to save the bowel from undergoing ischemic changes due to the increasing venous congestion[8]. Early administration of prophylactic antibiotics to control septicemia. The bowel when pushed intra abdominally carries the risk of contaminating the peritoneal cavity, especially since the bowel has been lying in contact with vaginal mucosa and the exterior. The basis of any surgical intervention offered to the patient aims at restoring the bowel back intra abdominally and closing the vaginal rent. In a review of case reports, series and retrospective studies done by Cronin and colleagues observed that a majority of cases that were reported were managed transvaginally and adbominally[1]. The author had taken into account all the available data for the last 30 years and concluded his review. We believe that use of laparoscopic assistance has been low since minimally invasive surgery has significantly matured only in the past decade. In this case, considering the laparoscopic findings in our patient (i. e. extensive bowel adhesions) on retrospect, one might favor a laparotomy over laparoscopy for better exposure and surgical ease. However with good optics and precise positioning during surgery this was overcome[9]. Also keeping in mind the patients age, BMI (47), nutritional status (S. albumin - 2.4) laparotomy might have been more morbid as compared to laparoscopy. The usage of laparoscopy has possibly averted grave wound complications following laparotomy.

CONCLUSION

Vaginal evisceration is a rare but life threatening condition. It requires prompt diagnosis and early surgical intervention with equal emphasis on the use of prophylactic broad spectrum antibiotics. Combined vaginal and laparoscopic approach is an effective method to reposition the bowel intraperitoneally[10].

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