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UTERINE PERFORATION AND GUT GANGRENE : A STALEMATE

General Surgery

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ABSTRACT

Uterine perforation can occur during dilatation and curettage by sounding the uterus or during the cervical dilatation. Uterine perforation can accompany intestinal injuries, which requires surgical intervention. Out of the wide range of these complications, iatrogenic small bowel perforation post dilatation and curettage, is more common than strangulation of a segment of bowel resulting in gut gangrene. . Herein, we present a unique case of 42-year-old female patient presenting with surgical abdomen, cause being gut gangrene because of bowel strangulation at the uterine perforation site, post dilatation and curettage for first trimester arrested pregnancy. . Once the diagnosis is made, prompt surgical intervention is deemed necessary, since if not treated can progress into peritonitis and consequently sepsis. Surgical approaches include open surgery as well as laparoscopic surgery. The type of surgery being it primary repair, segmental resection with primary anastomosis, or a temporal stoma is solely dependent on patient related factors as well as surgeon preference and experience.

KEYWORDS

Uterine perforation, Gut Gangrene, Gut gangrene and uterine instrumentation.

INTRODUCTION:

Endometrial curettage is a very common and safe surgical procedure routinely performed by gynaecologists. It is usually utilized for surgical termination of pregnancy and for diagnostic purposes. Although safe, it is not fully devoid of complications. Complications of dilation and curettage include uterine perforation which may be accompanied with a range of visceral organ injuries, including small bowel, sigmoid colon and bladder.[1] Uterine perforation can occur during dilatation and curettage by sounding the uterus or during the cervical dilatation. However ,if, only uterine perforation is present, it is managed conservatively. Uterine perforation can accompany intestinal injuries, which requires surgical intervention. Out of the wide range of these complications, iatrogenic small bowel perforation post dilatation and curettage, is more common than strangulation of a segment of bowel resulting in gut gangrene. Gut gangrene after dilation and curettage (D & C) of uterus is a poorly described complication despite being a potentially life threatening entity. For patients presenting with signs and symptoms of acute abdomen post endometrial curettage, suspecting bowel injury is of utmost importance. Herein, we present a unique case of 42-year-old female patient presenting with surgical abdomen, cause being gut gangrene because of bowel strangulation at the uterine perforation site, post dilatation and curettage for first trimester arrested pregnancy.

Case Report:

Here we present a case of a 42-year-old 6 parous woman who underwent a dilation and curettage (D & C) for missed abortion at 9 weeks of gestation. The procedure went uneventful. The patient had a smooth post operative recovery. But , 5 days later patient complained of abdominal pain and multiple episodes of vomiting. When enquired, she gave history of not passing flatus and motion for past 5 days. Surgery opinion was sought. On examination of the patient, the patient was dehydrated with sunken eyes and her look was toxic. Pulse rate was counted to be around 124 beats per minute and blood pressure was measured to be 94/56 mm Hg all suggestive of the patient being in a stage of circulatory shock. On examination of the abdomen, there was diffuse tenderness and guarding. There was board like rigidity of the abdomen. All these findings were suggestive of a case of acute abdomen. The decision was made to operate the patient and explore her abdomen. But, initial fluid resuscitation of the patient was done and when the clinical parameters of the patient improved , the patient was operated under general anaesthesia. Midline exploratory laparotomy incision was given. On opening the abdominal layers, there was no contamination fluid. The bowel was seen protruding into an opening on the fundus of the uterus (Figure 1).

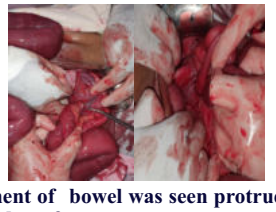

Figure 1 : A segment of bowel was seen protruding through an opening in the fundus of uterus .

The bowel was found to be strangulated inside that opening. So to retrieve the bowel segment, a small incision was made over the fundus extending from the site of opening. The bowel segment was dissected and cautiously retrieved. The opening on the fundus was later found to be the site of uterine perforation (Figure 2) which was repaired primarily.

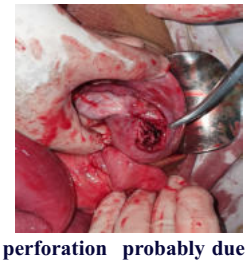

Figure 2 Uterine perforation probably due to instrumentation during dilatation and curettage, revealed after retrieval of the strangulated bowel segment.

The uterine perforation occurred probably due to instrumentation during dilation and curettage.The retrieved bowel segment was found gangrenous (Figure 3).

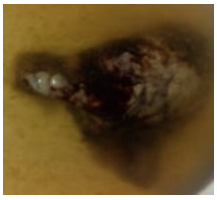

Figure 3 The resected gangrenous segment of bowel which got strangulated at the site of uterine perforation .

The whole of the gut was edematous with proximal dilatation of bowel loops and the distal bowel loops were collapsed. The decision was made to resect the gangrenous segment, which was found to be nearly 40 cm proximal to the ileocecal junction. Then, both the ends of the bowel loops after resection , were brought out over the abdominal wall as double barrel ileostomy over the anterior abdominal wall on the right side below the level of the umbilicus (Figure 4).

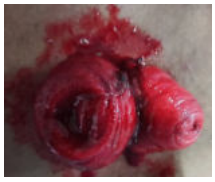

Figure 4 Both the ends of bowel , after resection of the gangrenous segment were brought out as double barrel ileostomy over the anterior abdominal wall on the right side below the level of the umbilicus.

The decision to not to secure the anastomosis of the resected ends was made solely based on the clinical condition of the patient and due to the edematous, unhealthy condition of the gut. It was done to avoid the risk of a probable anastomotic leak in future, which may necessitate the need of another surgery for the patient, which may prove fatal considering the clinical condition of the patient then.

The post operative period was uneventful. The patient was tapered off of the ionotropic support gradually. The ileostomy got functional on the post operative day 2. Bilious content was seen inside the stoma bag. The patient started tolerating oral feeds from the post operative day 4. The patient was discharged on post operative day 6 on oral antibiotics. Proper diet for the patients with ileostomy was thoroughly explained to the patient. Then patient was kept in regular routine follow up.

DISCUSSION:

Dilatation and curettage is a common and safe procedure, broadly divided into obstetric and gynecologic dilatation and curettage. Obstetric dilatation and curettage is used for surgical termination of pregnancy, although safe, it is not a complication free procedure. Among its complication is uterine perforation, with higher incidence in under developed countries.[2,3] Risk factors for uterine perforation include advanced maternal age, greater parity, retroverted uterus, and history of abortion and caesarian section.[4,5,6] A very rare complication post obstetric dilation and curettage is simultaneous uterine perforation and small bowel injury. Risk factors for bowel injury during dilatation and curettage are previous abdominal surgery and mainly pelvic surgery leading to post surgery adhesions between the small bowel and the uterus, rendering small bowel injury inevitable if uterine perforation occur. However, small bowel injury and mainly ileal segments can still occur even with no previous surgical history probably related to the anatomical location of the ileum and relatively short mesentery rendering it more fixed.[7] Iatrogenic small bowel perforation post dilatation and curettage, is more commoner.

But, strangulation of a segment of bowel at the uterine perforation site resulting in gut gangrene is a very very rare entity. Gut gangrene after dilation and curettage (D & C) of uterus is a poorly described complication despite being a potentially life threatening entity.(Figure 5)

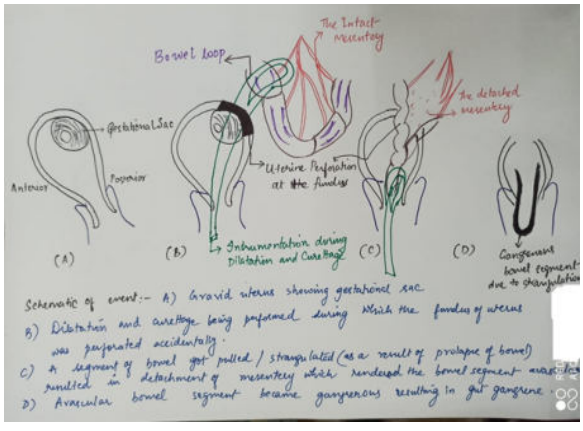

Figure 5 Schematic of the event.

In this case, simultaneous perforation of the uterus and the gangrene of a segment of small bowel due to strangulation resulting from prolapse of intestines through the uterine perforation site ,occurred following dilatation and curettage of the uterus for obstetric reasons.

The simultaneous injury to the ileum occurred for the reason that the whole small bowel, the ileum is at higher risk of simultaneous injury due to its anatomical configuration, the shortened and relatively fixed mesentery. The use of ultrasound during dilatation and curettage in patients at risk of uterine perforation may decrease the risk of bowel strangulation and perforation.

Being a potentially life threatening complication, bowel injury should be thought of, managed directly and at the earliest possible in every patient presenting with abdominal pain post dilatation and curettage. If suspected, the patient should be investigated by blood workup and imaging as soon as possible. Once the diagnosis is made, prompt surgical intervention is deemed necessary, since if not treated can progress into peritonitis and consequently sepsis. Surgical approaches include open surgery as well as laparoscopic surgery. The type of surgery being it primary repair, segmental resection with primary anastomosis, or a temporal stoma is solely dependent on patient related factors as well as surgeon preference and experience. In this case, we opted for resection of the gangrenous segment of bowel and exteriorization of both the bowel ends as double barrel ileostomy.

CONCLUSION:

In sum, iatrogenic small bowel injury post obstetric dilation and curettage, is an extremely rare complication without known incidence in the medical literature. Early diagnosis and management are of paramount importance as this will lead to decrease in the morbidity as well as mortality of such a complication. For a hemodynamically stable patient, management with laparoscopy could diagnose early and prevent disease progression in time. The use of ultrasound during dilatation and curettage in patients at risk of uterine perforation may decrease the risk of bowel perforation.

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