Section: General Surgery

Original Research Article

DILATION AND EVACUATION : AN UNSKILLED INTERVENTION, A SURGICAL HAZARD

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Abstract

Background: With this article we wish to emphasize on the morbidities and mortalities associated with this procedure and the need to make abortion a more readily available facility in the most difficult parts of Jharkhand and also to create awareness amongst masses regarding the fatality of these procedures when performed by unqualified professionals. **Materials and Methods:** We hereby present an article where patients came to the emergency of RIMS with bowel protruding per vaginum following dilation and evacuation. All underwent the procedure in their homes by untrained personnels. The patients were assured that their identities would not be revealed and proper consent was taken. All presented in hemodynamically unstable conditions. Following resuscitation these patients were explored. **Result:** Three patients operated primarily at RIMS had ruptured uterus with parts of fetus and placenta lying intraabdominally. Four out of five patients underwent hysterectomy along with resection of major parts of their small and large intestine. One patient had an injury to the bladder and an associated vesicovaginal fistula. One patient succumbed to the injuries and died. Four patients who underwent hysterectomy lost their reproductive function at a young age. A girl aged 19 ended up with a permanent end colostomy as her rectum had been damaged beyond repair. All the fetus that were procured at RIMS were found to be females. **Conclusion:** Dilation and evacuation (D&E) is the most common procedure used to perform second trimester abortions, usually done between 13–24 weeks of development. The cervix is dilated using a laminaria or other method, and then the uterine contents are removed using a combination of suction and instruments (curettes and forceps). The procedure can take up to 30 minutes. Anesthesia or analgesics are often used. D&E abortion is a safe and effective method when performed by trained, experienced providers. This procedure is also sometimes used after a miscarriage to ensure that the uterus has been completely emptied to prevent infection. Uterine perforation is a serious complication of intrauterine gynecological procedures and instrumental abortion in particular. It can lead to evisceration of the intra-abdominal viscera through the uterine perforation. It is therefore a real surgical emergency with multiple and fatal consequences.

INTRODUCTION

Abortion is defined by WHO as the complete expulsion of the products of conception from the uterus before 20 weeks of gestation or in the absence of accurate dating from the date of onset of last menses as the delivery of a fetus weighing less than 500 g.[1] Dilation and evacuation (D&E) is the most common procedure used to perform second trimester abortions and is usually done between 13–24 weeks of gestational age. The cervix is dilated using a laminaria or other method to ease removal, and then the uterine contents are removed using a combination of suction and instruments (curettes and forceps). The procedure can take up to 30 minutes. Anaesthesia or analgesics are often used in order to reduce the pain. D&E abortion is a safe and effective method when performed by trained, experienced providers. This procedure is also sometimes used after a miscarriage to ensure that the uterus has been completely emptied to prevent infection.[2] Complications like bleeding, infection, shock can be associated with this procedure if performed by unskilled professionals. Uterine perforation is a serious complication of this procedure. It can lead to evisceration of the intra-abdominal viscera through the uterine perforation

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and the contents will protrude through the vagina. It is therefore a real surgical emergency with multiple and fatal consequences.[3] The associated morbidities with this procedure need to be highlighted to prevent such disastrous outcomes and to bring to the notice of people belonging to medical profession about the severity of complications that could be associated with it if proper care is not taken.[4] The clinical manifestations are often a persistent vaginal hemorrhage, abdominal pain related to a visceral perforation, hematuria or more rarely evisceration of the abdominal contents, notably the small intestine, the sigmoid, the omentum, and the ovary.[5]

MATERIALS AND METHODS

We hereby present a case series of 5 cases which presented at RIMS and other medical facilities with evisceration of bowel post dilation and evacuation. Three of these cases had presented with bowel protruding per vaginum to RIMS and the other two presented similarly at other medical facilities. The latter two were operated at different facilities and were referred to RIMS.

All patients were stabilized and operated under general anesthesia

Proper consent were taken after assuring that the names and identities of the females would not be revealed.

RESULTS

Table 1: Information regarding individual cases

	A	B	C	D	E
Age	19	22	25	30	28
Marital status	Unmarried	Married	Married	Married	Married
Parity	0	2	2	1	1
Lag period	>24 hours	<12 hours	<12 hours	<12 hours	<12 hours
Gestational age	24weeks	22weeks	23weeks	20weeks	16weeks
Underwent d n e at	Home	Home	Home	Home	Home
Primary surgery	RIMS	RIMS	RIMS	Outside	Outside
Presentation at primary medical facility	Bowel protruding per vaginum	Bowel protruding per vaginum	Bowel protruding per vaginum	Bowel protruding per vaginum	Bowel protruding per vaginum
Presentation at RIMS	Bowel protruding per vaginum	Bowel protruding per vaginum	Bowel protruding per vaginum	Urine and stool in abdominal drain+ stool in per urethral catheter	Faecal discharge from midline
Bowel involvement	Degloving injury of descending and sigmoid colon ,rectal perforation	Terminal ileum Two and half feet from ileo-caecal junction	Mesenteric tearing of Jejunum two and half feet from duodenojejunal flexure till ileum 5 cm proximal to ileo-caecal junction+ degloving injury of ascending colon	Multiple sigmoid perforation	Multiple ileal and jejunal perforations
Bladder	Normal	Normal	Normal	Rupture at dome	Normal
Uterine perforation	Posterior	Posterior	Fundus	Posterior	Posterior
Fetus location when operated at RIMS	Intra abdominal	Intra abdominal	Intra abdominal	Absent	Absent
Gender of fetus	Female	Female	Female	Undocumented	Undocumented
Hysterectomy	Yes	Yes	Yes	Yes	No
Duration of hospital stay	11days	15days	24days	45days	67days
Procedure	Resection+ permanent end colostomy	Resection+ end ileostomy	Resection + end ileostomy	Sigmoid resection and anastomosis+ loop ileostomy+ bladder repair	Resection+ anastomosis+ end ileostomy
Complication	None	None	Respiratory	Vesicovaginal fistula	Reperforation+ death
Follow up	None	Ileo-transverse anastomosis	Ileo-transverse anastomosis	Reversal of stoma	Death

DISCUSSION

All cases underwent dilation and evacuation at home. Age range was from 19-30 years. Implying the fact that underage girls might not even present at medical facilities. Of the 5 patients 1 was unmarried and presented to RIMS after 24 hours implying that unmarried females might not seek medical facilities. All married females presented within 12 hours from the procedure.

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All females presented with bowel protruding per vaginum at the facility where they were operated primarily. In all three cases that were operated primarily at RIMS, the bowel that had protruded from the vagina was found to be gangrenous at presentation. There was no relation found between parity and the undertaken procedure.

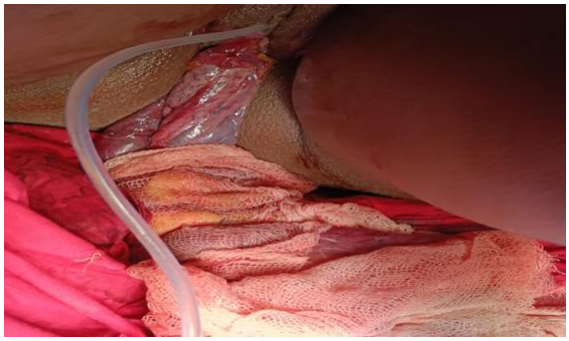


Figure 1: image showing bowel protruding per vaginum

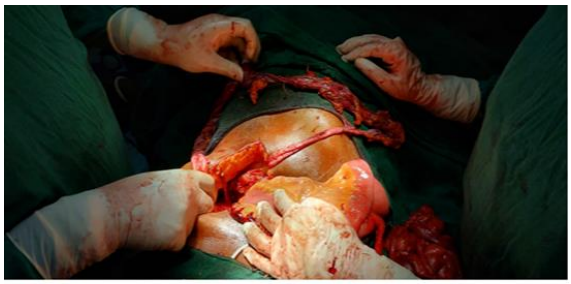
Bowel: When a small bowel protrudes through the tight opening, an obstruction occurs in this increasing order of severity: a simple obstruction with just non passage of stool and flatus, strangulation where the blood supply to the bowel gets compromised, mesenteric stripping/detachment, and a small bowel degloving injury. The most common openings for a small bowel evisceration are the uterine and the vaginal walls.[6] the use of uterotonics during induced abortions leads to uterine contraction and could be responsible for the strangulation occurring in these cases.[7]

There was some form of bowel involvement in all cases. In two cases there was large gut involvement with sigmoid being commonly involved. In the other two ileum and jejunum were involved. There was one case with the involvement of ascending colon and ileum.

In one case the bowel had been separated from the mesentery as shown in the image.

Figure 2: showing bowel separated from mesentery also known as mesenteric stripping

Mesenteric stripping, the third degree of severity of small bowel obstructions, is defined as a detachment of mesentery from the bare 'tube' of the small bowel.[5] we observed the jejunum from 2and ½ feet from duodenojejunal flexure till ileum uptil ten centimetres proximal to ileocaecal junction had been separated from its attached mesentery. The haemoglobin of this patient was 6.4gm/dl.



DESSICATING BOWEL

Figure 3: showing the dessicating bowel which has been reduced per abdomen

Figure 4: multiple sigmoid perforations

FETUS: In all cases parts of the fetus were found to be intra abdominal. All the three fetus that were procured at RIMS were found to be females. There was no documentation of the gender of the fetus where the patients were operated at other facilities. The gestational age ranged from 16-24 weeks with mean being 21 weeks.

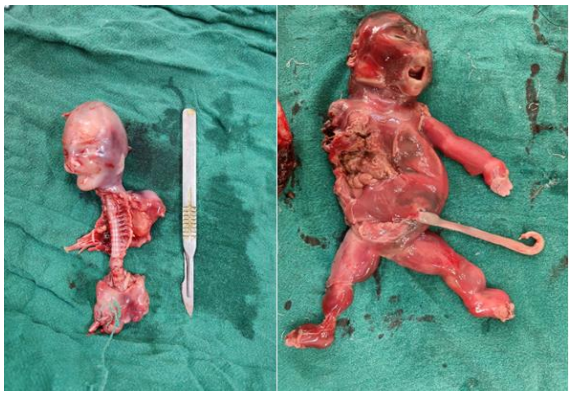


Figure 5: showing procured parts of fetus

Uterus: In four out of five cases there was perforation of the uterus at the posterior aspect. In one case the fundus had been ruptured. Implying that in dilation and evacuation the most commonly ruptured part is the posterior part.4 out of 5 patients underwent hysterectomy.

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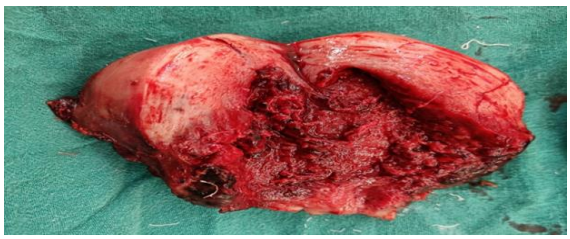

Figure 6: showing ruptured uterus

Bladder: The bladder was found to be normal in 4 out of 5 cases.

In one case that was operated outside presented with urine coming out of the abdominal drain. We changed her per urethral catheter and stool started coming from it. Upon operating, the bulb of the foley's catheter was found to have negotiated one of the eyes of the abdominal drain. The fundus of the dome of the bladder was open and there were multiple sigmoid perforations.

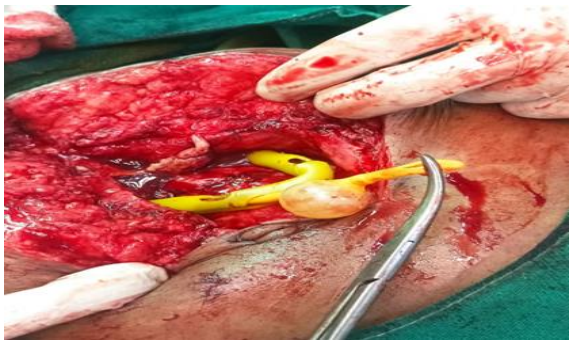

Figure 7: showing foley's catheter having negotiated the abdominal drain

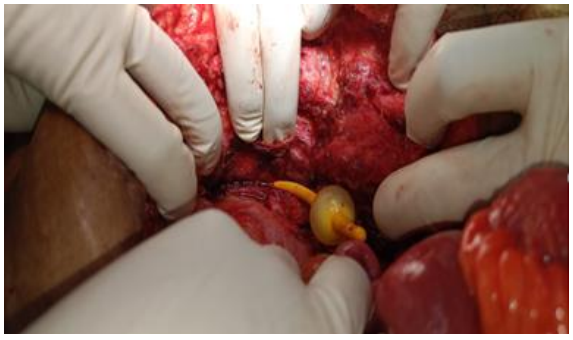

Figure 8: showing the foley's bulb visible through the dome of the bladder

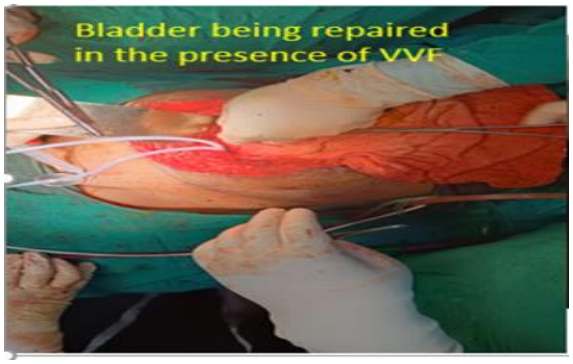

Figure 9: showing bladder repair in the presence of vesicovaginal fistula

Complications:

1. Vesicovaginal fistula: upon operating case D, where there was stool and urine coming out of the abdominal drain, we had inserted the foley's catheter which came out through the vagina. Intraoperatively we tried to insert Ryle's tube through the opening of the urethra in the bladder and the Ryle's came out through the vagina. That's how we concluded that a vesicovaginal fistula might be present. This was confirmed later on by the urology department after further investigations
2. Respiratory complication
3. Leak/reperforation: Upon operating case E that was operated outside and presented with stool coming from midline as shown in the image below. She had a double barrel ileostomy and on re-exploration she had multiple ileal perforations. She underwent resection of the segment containing perforations and an end ileostomy. The patient succumbed to death after 67 days of treatment.

Figure 10: case E came to the emergency department of RIMS with stool coming from midline and a double barrel stoma

The range of stay was from 11-67(mean-32.4) days with cases associated with complications having longer duration of stay.

CONCLUSION

- Bowel is the most frequent organ to bear the brunt of unskilled dilation and evacuation
- Bladder is usually not involved
- In dilation and evacuation the most commonly ruptured part of the uterus is the posterior part. Most females end up losing their reproductive function as a sequelae of hysterectomy
- Delay in presentation has no relation to mortality
- There is no relation between parity or gestational age and opting for the unskilled intervention
- underage girls might not even present at medical facilities
- unmarried females might not seek medical facilities

The kind of morbidity that a female has to suffer even in the 21st century related to obstetrical procedures is disheartening and alarming at the same time.

With this article we wish to emphasize on the need to make dilation and evacuation a more readily

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available procedure and to abolish the taboos associated with abortions.

The incidence of female foeticide has not decreased despite the efforts taken by the government.

We wish to bring to everyone's notice the consequences a female has to suffer due to lack of skilled professionals in peripheries and urge every female regardless to present to medical facilities for this procedure.

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