



Case Report

A LATE PRESENTATION OF AN UN NOTICED IATROGENIC JEJUNAL PERFORATION WITH ABDOMINAL DRAIN TUBE FOLLOWING TOTAL ABDOMINAL HYSTERECTOMY: A RARE CASE REPORT.

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Abstract

Surgical drains are commonly placed in abdominal cavity to assess abdominal fluid or blood collections following major abdominal surgery. Whatever the purpose of drain placement either therapeutic or prophylactic it must deserve a great caution while penetrating through the parietal wall. This case report documents one patient with serious iatrogenic complication aroused from abdominal drain tube following an open total abdominal hysterectomy procedure.

Key words: Drain tube complication, iatrogenic jejunal perforation.

Introduction

Following laparotomy drain tubes are traditionally placed in abdominal cavity with either therapeutic or prophylactic intention since time immemorial¹. There are randomized controlled trials suggesting that their use in gastric, duodenal, small bowel, appendix and biliary surgery is unnecessary and may cause more problems than benefit and this is now reflected in current practice². We report a case of an iatrogenic jejunal perforation during abdominal drain tube placement following a routine total abdominal hysterectomy at a remote hospital.

Case Report

A 52-years-old woman, mother of 3 children was diagnosed as a case of fibroid uterus and she underwent routine total abdominal hysterectomy at remote hospital under spinal anaesthesia. Two days following surgery she developed gradual abdominal distension,

no bowel movement and persistent abdominal pain. So, she was transferred to Enam Medical College & Hospital, a tertiary care center.

On clinical evaluation she was found conscious, well oriented, and hemodynamically stable but no bowel movement and distended abdomen with lower abdominal tenderness. Drain tube collection noted about 100 ml serosanguinous fluid by two days. She had mild fever, no vomiting and adequate urine output noted in urobag. Her operative details were not available. Pfannenstiel wound was found repaired with subcuticular suture and dressing was dry. A 16 FR drain tube was found on left side of the abdomen and the surrounding area of the drain was indurated with dry dressing around. As she was hemodynamically stable, without previous operative details we started conservative approach with nothing per oral, intravenous fluids, broad-spectrum antibiotics, and adequate analgesics.

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Table 1: Hematological and bio-chemical values

Parameters	Values
Hemoglobin	13.4 g/dL
TC of WBC	14080/cu mm
Neutrophil	87 %
ESR	08 mm
HCT	40%
Urea	3.4 mmol/L
Creatinine	96 µmol/L
Bilirubin	0.3 mg/dL
Na ⁺	140 mmol/L
K ⁺	4.4 mmol/L
Cl ⁻	107.7 mmol/L

After investigations, her hematological and biochemical parameters revealed only neutrophilic leukocytosis [Table 1]. On imaging study, abdominal radiograph showed pneumoperitoneum and it was considered with usual post laparotomy status [Figure 1]. Ultrasound evaluation revealed no intra-abdominal collection but right sided mild pleural effusion. With conservative treatment, there was no significant improvement and ultrasound study repeated on 4th day which revealed mild collection in the pelvis [Figure 2].

On 5th day there was bile stained collection noted in the drain tube. Then all possible aspects were thought and counselled with patient's guardian and prepared for exploratory re-laparotomy. Exploratory laparotomy through midline incision revealed moderate amount of bile stained collection in pelvis and in left peracolic gutter. Multiple loops of small gut were matted together adjacent to the drain site. With meticulous handling of the gut it revealed a loop of jejunum firmly adherent to the parietal wall with through and through perforation by drain tube approximately 50 cm distal to the duodenojejunal flexure [Figure 3]. There was also bilious collection noted within the parietal wall from inside.

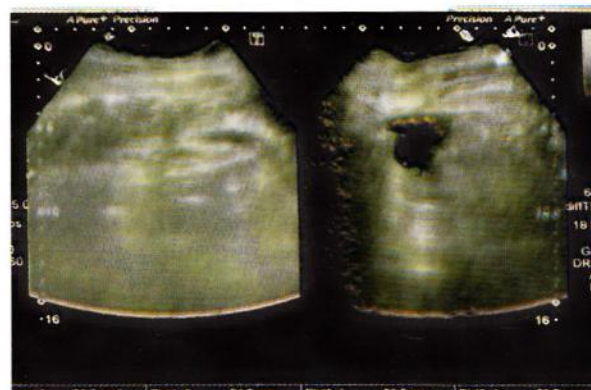
Thorough peritoneal toileting was and margins of jejunal perforations were trimmed to make a single defect which was then repaired by single layer interrupted vicryl sutures [Figure 4]. Linea alba was closed by continuous vicryl suture and skin was left open for delayed primary closure. Parietal wall collections were drained from outside.

**Figure 1:** Radiological impression of pneumoperitoneum

Patient responded very well after re-laparotomy and surgical care of parietal wall cellulitis continued. On 6th postoperative day delayed primary closure of midline surgical wound was done and parietal wall wound was allowed to heal by secondary intention.

Discussion

There is a paucity of evidence for the benefit of many types of surgical drainage and many surgeons still follow their traditional practice. Management of a drain tube is governed by the type, purpose and location of its placement. It is usual for surgeon's preference and instruction to be followed. A written protocol can

**Figure 2:** Ultrasound scan showing peritoneal collection

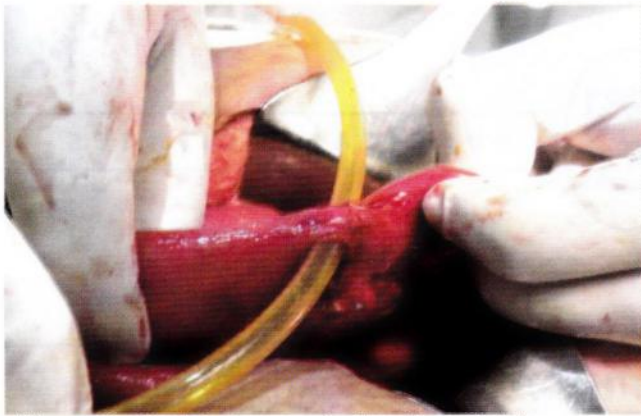


Figure 3: Drain tube penetrating through jejunum

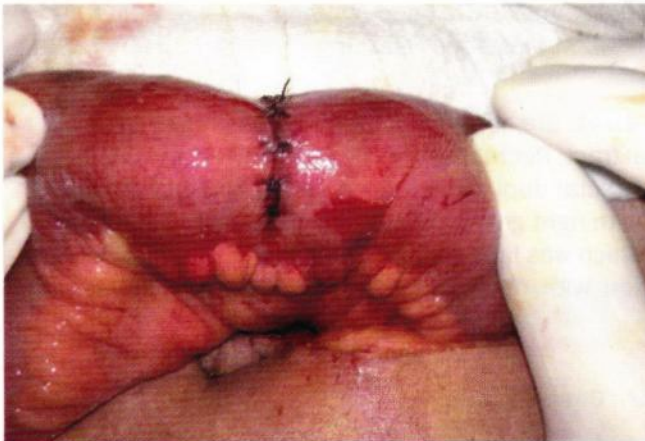


Figure 4: Primary repair of perforation site

help the staffs of the ward with the aftercare of the surgical drain³. Various complications of an abdominal drain tube have been defined so far⁴. These include pressure necrosis of the adjacent tissue, bleeding, perforation, migration, fistulization, drain site hernia, mechanical bowel obstruction, and drain site infection.

In our case the indication of drain tube placement after routine abdominal hysterectomy was not clear due to lack of operative details. Immediate postoperative paralytic ileus and radiological impression of pneumoperitoneum are not unusual. So, conservative approach was planned till the appearance of bilious collection in drain tube. Bile collection in drain tube was revealed later because it required enough time for accumulating in

peritoneal cavity and reach the drain tube. Besides, the bile leaked around the drain tube from marginal necrosis of jejunum and percolated through the parietal wall which caused clinically evident induration. So, there are always some precaution needed to be taken during a drain tube placement and removal. Purpose of drain should be judiciously decided first. If needed surgeon should penetrate through the parietal wall under the direct vision by lifting up the abdominal wall. Gut and other viscera should be guarded by mop or surgeon's hand. And drain should be exteriorized by the shortest safe route and shouldn't be brought out through the surgical incision⁵. Drain tube materials should be soft, flexible and with blunt tip.

Conclusion

Random surgical use of abdominal drain may be more detrimental than patient's benefit. Drains are not a suitable for good surgical technique. To avoid such complication blind parietal wall penetration must be discouraged and possibility of bowel injury should always be kept in mind when draining the abdominal cavity following any surgery done elsewhere.

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