

## Case Report

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# Laprotomy: Treatment or a Nightmare



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## Abstract

Explorative laparotomy is a surgical procedure performed with the objective of obtaining information that is not available via clinical and diagnostic methods. It is usually performed in patients with acute or unexplained abdominal pain, in patients who have sustained abdominal trauma and occasionally for staging in patients with malignancy. Post-operative complication may occur after laparotomy whether elective or emergency, including wound infection, wound dehiscence, anastomosis disruption, adhesive bowel obstruction, incisional hernia and post op pain which remain the challenging problems.

We Present a 4 months old female child being recieved in emergency department with complaints of passing stool from incision site. She was operated for intussception 13 days ago. Her post-operative course was complicated and she was re-explored 6 days later because of burst abdomen. Multiple perforation were seen, as a result jejunum ileostomy was made. A diagnosis of Enterocutaneous Fistula was made, hence after management of sepsis, jejunum ileostomy reversal was planned.

During that reversal, multiple adhesions were noted. She was managed conservatively. Post-operative complications are more common after emergency laparotomies. Early detection & immediate intervention with better postoperative care can minimise the complications. We aim to provide proper awareness to seek prompt medical aid, a good referral and efficient transportation can reduce the delayed presentation which in turn will prevent postoperative complications following emergency laparotomy.

**Keywords:** Explorative laparotomy; Enterocutaneous fistula; Jejunum ileostomy; Lister; Semmelweis

## Introduction

An explorative laparotomy is a surgical procedure performed with the objective of obtaining information that is not available via clinical and diagnostic methods. In surgical language, the word laparotomy explains exploration of the abdomen and proceed further according to the cause identified [1]. It is usually performed in patients with acute or unexplained abdominal pain, in patients who have sustained abdominal trauma and occasionally for staging in patients with malignancy.

Post-operative complication may occur after laparotomy whether elective or emergency. Post-operative pain, nausea, vomiting are common but some patients develop short and long term complications like fever, wound infection, wound dehiscence, anastomosis disruption, adhesive bowel obstruction, incisional hernia, etc. Such complications are more frequently seen after emergency surgeries, but they do occur in elective procedures

also, which is a matter of concern [2]. Wound infection, wound dehiscence and incisional hernia remain challenging problems.

Preoperative antibiotic prophylaxis, effective and persistent skin antisepsis, avoidance of contamination and better surgical skills are most effective methods to reduce complications Wound infection is the most important single factor in the development of burst abdomen and incisional hernia [3]. Ancient surgeons recognized that foreign bodies and dead tissue must be removed from wounds [4]. Lister, Semmelweis, Ehrlich, Fleming and Foley realized that bacteria prevented healing and lead to sepsis and death, and their control by asepsis, antisepsis and anti-microbials heralded a new era in wound management [5-6].

## Case Discussion

A 4 months old female child was recieved in Emergency of Holy Family Hospital in sick condition with complaints of passing stool

from incision site. She was operated for intussusception 13 days ago. Unfortunately her post-operative course was complicated and she was re-explored 6 days later because of burst abdomen. Peri-operatively multiple perforation were seen along with 1.5 litre fecal contamination. As a result jejunostomy was made and stoma output was monitored.

One month later she presented to ER with above mentioned symptoms. On examination fever of 102F was noted along with tachypnea (55 breaths per min) and tachycardia (160bpm). Child looked sick and was oxygen dependent.

Abdomen was soft, non-tender with positive bowel sounds. Chest was bilaterally clear with no added sounds and cardiovascular exam was also normal. However skin excoriation at stoma site was noted (Table 1).

**Table 1:** Recent labs showed.

TLC	5.3
HB	11.6
Plt	12000
CRP	58.6
UREA	37
CREATININE	0.9
SERUM BILIRUBIN	2.1
ALT	17
ALP	192

Diagnosis of Enterocutaneous Fistula was made. Child was managed in emergency and later on in ICU. Antibiotics were given according to C/S report. After management of sepsis, jejunostomy reversal was planned.

During that reversal, multiple adhesions were noted. Gut was friable with serosal tears. Postoperatively fistula output was also monitored and it was managed conservatively. Patient recovered well and was discharged to home.

## Discussion

Postoperative intestinal obstruction is a common problem encountered in children and is mostly attributed to intestinal adhesions and adynamic ileus [7,8]. One forgotten cause of postoperative intestinal obstruction is postoperative intestinal intussusception [9].

Impaired wound healing and higher risks to develop wound infection can increase the risk of developing abdominal wound dehiscence in children usually younger than 1 year [10-12]. Necrotizing enterocolitis is highly prevalent in this age group and is without exception, which is combined with poor clinical condition and emergency surgery, which again negatively influences wound healing. Increased abdominal pressure due to ileus or mechanical ventilation may put a patient at risk for abdominal wound dehiscence.

In our case the child was operated for intussusception. It is also referred as Jejunogastric intussusception, which occurs most frequently following gastric surgery including gastrojejunostomy, Billroth II gastrectomy, and Roux-en-Y gastrojejunostomy [13].

Chronic recurring jejunogastric intussusception can be a more challenging diagnosis. These patients can report with vague epigastric discomfort, nausea, and vomiting and even history of gastrectomy. Eating post-prandial can exacerbate the pain which can last for 60-90min. Imaging for chronic recurring jejunogastric intussusception is similar to the acute type, though obviously complicated by timing [14]. A unique endoscopic test has been described by Abraham et al. that involved endoscopically directing a jet of water at the jejunogastric anastomosis that resulted in invagination of jejunum into the stomach [15].

Multiple etiologies are there for jejunogastric intussusceptions have been suggested, including increased acid exposure, shortening of the mesentery, short mesocolon, negative pressure in the stomach, a large stoma, jejunal stenosis, or a long efferent loop. Abdominal trauma, scar tissue, parasites, and gastrostomy tubes have been confirmed in previous reports [13].

Gentle handling, avoidance of desiccation of the bowel can be the preventative measures for post operative intussusception, also using a minimally invasive approach [16].

Ran Jung [17] reported the only case of intussusception through an ileostomy investigated by an abdominal CT scan in order to detect abdomen intestinal necrosis [17]. It is a surgical emergency because of the risk of intestinal necrosis. The treatment must be conservative, which is classically based on a manual reduction under general anesthesia with probability of conversion to laparotomy in case of failure of the non-invasive reduction [18].

Development of enterocutaneous fistula is more frequent after emergency surgery when the patient preparation is poor or in the chronically debilitated, malnourished state [19]. It is initially managed by fluid resuscitation, electrolyte replacement, nutritional support, bowel rest, and control of fistula drainage and having adequate nutrition while on bowel rest can be ensured with use of TPN.

Interestingly, such our case had a conservative treatment with an elective reduction. Thus, there is no resort to a midline incision in the absence of intestinal necrosis or unsuccessful of the manual reduction.

## Conclusion

Post-operative complications are more common after emergency laparotomies. Maximum complications are seen in patients of delayed presentation or in patients having any associated co morbidities. Therefore early detection, immediate intervention with better postoperative care can minimize the postoperative complications. The present study suggests that

proper awareness among rural populations, adequate health education to seek prompt medical aid, a good referral and efficient transportation can reduce the delayed presentation which in turn will prevent postoperative complications following emergency laparotomy.

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