ORIGINAL RESEARCH PAPER

General Surgery

INDICATIONS AND MORBIDITY OF TEMPORARY LOOP ILEOSTOMY IN A TERTIARY CARE CENTER

KEY WORDS:

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INTRODUCTION

Ileostomy is an opening constructed between the ileum and the abdominal wall for the faecal diversion through it.[1]

Ileostomy can be classified as follows:
1. End ileostomy
2. Loop ileostomy
3. Double barrelled
4. Continent ileostomy (Kock pouch)

Faecal diversion through a temporary stoma in cases of perforation peritonitis can be a life saving measure and can reduce the incidence of anastomotic leaks in distal colorectal anastomosis.

In India, typhoid fever is the most common cause of ileal perforations. Tuberculosis, trauma, non-specific enteritis, inflammatory bowel disease, malignancy and foreign bodies account for the rest.[2]

Most patient of ileal perforation present as diffuse peritonitis and late with MODS (Multi organ dysfunction syndrome).[3]

Diagnosis of bowel perforation is confirmed radiologically by X- ray chest and abdomen. Ultrasound of the whole abdomen with needle aspiration can also be done for unusual fluid collections.[4]

Early systemic complication in these cases is due to fluid & electrolyte loss and nutritional depletion.

Local complications described for a temporary loop ileostomy include:- Peristomal skin irritation leading to skin excoriation. Others such as bleeding, ischemia, intestinal obstruction, prolapse, retraction, fistula formation, stenosis, residual abscess, wound infection, parastomal herniation and incisional hernia have also been described.[5]

Aim And Objectives

To study the demography, etiology and pathology of conditions necessitating a temporary loop ileostomy and morbidity in patients with the same.

MATERIAL AND METHODS

This was a prospective observational study over a period of one year on 50 patients of temporary loop ileostomy.

RESULT

The maximum number of patients 16 (32%) were in the 11-20 year age group.The mean age was 35.26 ± 19.3 years.

The sex incidence was 70% males and 30% females.

The indications for constructing a temporary loop ileostomy included:
1) Non-specific perforation (32%)
2) typhoid and tubercular perforation 18% each.
3) Trauma (blunt or penetrating) 12%,
4) intestinal obstruction 10%,
5) strangulated hernia 6%,
6) small bowel mesenteric ischaemia 2%,
7) carcinoma large colon 2%

Systemic Complications Included:

- ✓ Chest infection (32%)
- ✓ Electrolyte imbalance (30%)
- ✓ Acute renal failure (24%)
- ✓ associated Anemia (22%)

Local Complications Included:

- ✓ Surgical site infection (30%)
- ✓ skin excoriation (18%)
- ✓ burst abdomen (16%),
- ✓ small bowel obstruction (10%)
- ✓ small bowel prolapse and bleeding (6%)
- ✓ retraction (4%),
- ✓ and stenosis (2%)

70.6% males and 84.6% female had psychological problems like anxiety, depression, loss of confidence, fear of rejection. 82.4% males and 76.9% female complained of physical restriction in daily home activities, had clothing problem and sexual inactivity.

DISCUSSION

In our study, the mean age of loop ileostomy was 35.26 ± 19.3 years with a male(70%) to female(30%) ratio of 2.33:1 and similar result was found by Jawahar Krishnaswamy et al in their study which also had mean age of 37.8 years with 73% males to 27% females ratio of 2.7:1.

Poras Chaudhary et al[7] in New Delhi also found that the mean age of most of their loop ileostomy patients were 34 years with a male to female ratio of 1.8:1.

In our study, non-specific perforation was the most common cause (32%) for perforation peritonitis which required a temporary loop ileostomy, followed by typhoid and tuberculosis 18% each, trauma 12%, intestinal obstruction 10%, strangulated hernia 6%, mesenteric ischaemia and carcinoma were 2% each which had similar result with Nadkarni et al[8] in their study who also found high incidence of

non-specific perforation as the most common cause for performing a loop ileostomy.

In our study, local complications which was present in 30% of patients was surgical site infection followed by skin excoriation (18%) patients, burst abdomen (16%), obstruction (10%) patients, prolapse and bleeding (6%) patients, retraction (4%) and stenosis in (2%) patients. These were similar to Maneshwar Singh Mittal et al[9] in their study who also found the local surgical site infection as the most common post-operative complication in (35.0%) patients which progressed to wound dehiscence in six (15%) patients and two (5%) of these progressed to burst abdomen.

Skin complications were minimized by the creation of a properly prolapsed ileostomy that "spouts" effluent into the appliance, minimizing leakage of sucus beneath the faceplate and had similar to Oakley JR[10] study who concluded that proper siting of the ileostomy with a spout of 4-6cm above the skin margin went a long way in decreasing this complication.

In our study, 70.6% males and84.6% females had psychological problems like anxiety, depression, loss of self-confidence and fear of rejection. 82.4% of males and 76.9% females experienced physical restrictions in their daily home activity, clothing problem, restriction in sexual activity which had simiar result with Fakhrialsadat Anaraki et al in 2012[11] who demonstrated that 83.3% stoma patients had to change their job, 82.4% had to change their diet and 48% had to change their clothing style. They also found that psychological implications after stoma surgery in 63% patients was depression.

CONCLUSIONS

- The mean age of performing a loop ileostomy was 35.26 ± 19.3 years with the maximum number of patients 16 (32%) in the 11- 20 year of age group.
- Loop ileostomy was commoner in males as compared to females in a ratio of 2.33:1.
- In our study, non-specific perforation was the most common cause (32%) for performing a temporary loop ileostomy followed by typhoid and tubercular perforation in 18% cases each. Blunt or penetrating trauma accounted for 12% of patients, small intestinal obstruction 10%, strangulated hernia 6%, small intestinal mesenteric ischaemia and carcinoma colon 2% each made up for the rest.
- Exploratory laparotomy with a temporary loop ileostomy and exteriorisation of a perforation site is a life saving measure.
- The only drawback of an ileostomy is the need for a second operation to restore the intestinal continuity. However the increased survival rate makes the procedure worthwhile in cases of perforation peritonitis.
- The mean duration of hospital stay in our study was 21.08±9.03 days.
- Systemic complications like chest infection was seen in (32%) patients followed by electrolyte imbalance in (30%), acute renal failure in (24%) and anemia in (22%) patients and these delayed the recovery in the post operative period.
- Other local complications were surgical site infection (30%), skin excoriation (18%), burst abdomen (16%), obstruction (10%), prolapsed (6%), bleeding (6%), stoma retraction (4%) and stenosis (2%).
- Skin excoriation was present in only 18% of our patients because the length of ileostomy spout in most of our cases was 4-6cm from the skin which facilitated faeces collection in the stoma bag.
- 70.6% males and 84.6% females had psychological problems like lack of confidence, anxiety, depression, fear of rejection while 82.4% males and 76.9% females experienced physical restrictions in daily home activities, clothing problem and restriction in sexual activity.
- Most ileostomies could be reversed by the 89.13 ± 38.9 days without complications
- Mortality occurred in only 3 patients who presented late with shock and MODS.

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