



## Research Article

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## Descriptive Study of Ileostomy Causes at Abu Ali Sina Balkhi Regional Teaching Hospital Mazar-I- Sharif Durning the Year 2024

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**Abstract:** The present study aims to conduct a descriptive analysis of ileostomy at the Abu Ali Sina Balkhi Regional Teaching Hospital. This research is a descriptive study of the Case Series type. The study was conducted on patients who were admitted to the Abu Ali Sina Balkhi Regional Teaching Hospital. The study population consists of hospitalized patients who underwent ileostomy from March 2024 to February 2025, with a total of 50 patients. Results The findings indicated that ileostomy had a higher prevalence among hospitalized patients, particularly in cases of acute abdominal conditions, compared to general outpatients. Among the studied patients, most ileostomy cases were performed due to gangrenous small bowel obstruction and penetrating abdominal injuries. Additionally, the most commonly performed type of ileostomy was loop ileostomy, widely used due to its simplicity and clinical applicability. The study also observed that ileostomy was more frequent among males compared to females and was more common in younger age groups. These findings highlight the need for special attention to specific age groups and genders in the management of ileostomy patients. Furthermore, post-ileostomy complications, particularly skin irritation and surgical site infections, were among the most common postoperative issues, requiring continuous follow-up and specialized care.

**Keywords:** Ileostomy, Age, Gender, Residence, Type of Ileostomy, Skin Irritation, Edema

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## INTRODUCTION

Ileostomy is a type of stoma (surgically created opening) that is formed by bringing the end or a loop of the small intestine (ileum) to the surface of the skin. Fecal matter exits through the ileostomy and is collected in an external ostomy system placed adjacent to the opening. Ileostomies are typically positioned in the right lower quadrant of the abdomen. Currently, approximately 72,500 to 150,000 individuals in the United States undergo ileostomy procedures annually. The complication rate is around 7.23%, while mortality is more frequently observed in elderly patients, malnourished individuals, and those with immunosuppressive conditions such as HIV, with a mortality rate of approximately 1.47% (1).

Given the complexities associated with ileostomy, including underlying causes, surgical techniques, and postoperative outcomes, comprehensive and detailed studies in this field are essential. A scientific investigation of the etiology and associated factors of this procedure can lead to a better understanding of its common indications, clinical challenges, and treatment outcomes. This knowledge directly influences surgical care improvements and clinical decision-making.

## RESEARCH QUESTION

What is the prevalence of ileostomy cases in 2024 in the general surgery department of Abu Ali Sina Balkhi Regional Teaching Hospital?

## LITERATURE REVIEW

Kulssom *et al.* (2020) conducted a study on the frequency and complications of ileostomy in Karachi, Pakistan. The total number of patients in this study was 84, all of whom were over 12 years old.

Most of the patients were male (73.8%), while 26.19% were female. Among the 84 studied patients, the most common causes were tuberculous intestine (40.48%), typhoid ileal perforation (27.38%), trauma (27.38%), and gangrenous appendicular perforation (4.7%). Complications were observed in 72.69% of patients, with the most frequent being skin excoriation (19.4%), wound infection (13%), non-functioning stoma (11.9%), prolapse and stenosis (6%), and high-output fistula (3.5%). Despite being a common and life-saving surgical procedure, ileostomy remains prevalent in our clinic due to late patient referrals. While complications are frequent, they are manageable, highlighting the importance of early recognition and intervention to reduce patient morbidity.

In 2018, Vedant and colleagues conducted a prospective study in India on 30 cases of temporary ileostomy and their complications. The study included 30 patients, with ages ranging from 18 to 59 years. The youngest patient was 18 years old, while the oldest was 59. Pediatric patients (0–18 years) were not included. Among the participants, 22 were male and 8 were female, with an M:F ratio of 2.3:1. Five patients had a history of prior abdominal surgery, while 25 had no such history. The most common presenting symptom was abdominal

pain, observed in all patients, followed by abdominal distension (60.6%) and vomiting (50%). The most frequent clinical finding was abdominal tenderness, present in 100% of cases. Regarding causes, 7 patients had megacolon, 5 had ischemic bowel disease, 17 had trauma, and 1 had bowel cancer. Abdominal distension was noted in 60.6% of patients, guarding and rigidity in 56.6%, and air-fluid levels in 33.3% (10 patients). Abdominal ultrasound (USG) revealed dilated fluid-filled bowel loops in 7 out of 12 examined patients (58.7%). Additionally, 4 patients showed signs of free fluid in the abdomen. Among the 3 patients who underwent abdominal CT scans, one (33.3%) presented with an abdominal mass.

Complications were recorded in all patients, with stoma-related complications observed in 96% of cases (29 out of 30). The most common complication was peristomal skin excoriation (90%), followed by wound-related complications, which occurred in 36.6% of cases (11 out of 30 patients). The mortality rate in this study was 3.3% (1 out of 30 patients), with septicemic shock being the most common cause of death.

In 2011, Mahfuzur and colleagues conducted a descriptive study on the surgical outcomes of temporary ileostomy patients at a tertiary care center in Bangladesh. Patient data were collected from medical records. Over the study period, 100 patients were selected for observation and management of temporary ileostomy complications, with ages ranging from 15 to 65 years. Several systemic complications were recorded, the most common being electrolyte imbalance, occurring in 31% of patients. Regarding underlying causes, 7 patients had multiple sclerosis, 21 had severe constipation, 63 had trauma, and 9 had spinal cord injuries. Other systemic complications included hypoproteinemia (14%), respiratory tract infection (RTI) (6%), and significant weight loss (4%). The most common local complication was skin excoriation, observed in 32% of patients. Additionally, 36 patients developed laparotomy wound-related complications, with 28% experiencing superficial wound infections and 8% suffering from wound dehiscence. Other local complications included stomal site bleeding (5.9%), stoma retraction or stenosis (3.9%), stoma necrosis (2%), and parastomal hernia (2%).

## RESEARCH METHODOLOGY

This study is a descriptive case series. The study population consists of all hospitalized patients who underwent ileostomy in the general surgery department from March 2024 to March 2025. The sampling method is consecutive, meaning that all patient records with ileostomy were collected and analyzed. A total of 70 patients were included in the study.

### Inclusion Criteria

Patients who underwent ileostomy in the general surgery department of Abu Ali Sina Regional Teaching Hospital during the year 2024 (2024–2025).

### Exclusion Criteria

Patients who did not undergo ileostomy surgery or refused the procedure.

### Data Analysis

**Table 1: Number and Percentage of Ileostomy Cases Based on General Admissions**

Cases	Number of Patients	Percentage
General Admissions	17,187	100%
Ileostomy	50	0.29%

Table (1) shows the number and percentage of ileostomy cases compared to general admissions to the hospital. Out of a total of 17,187 admissions, only 50 patients (0.29%) underwent an ileostomy procedure.

**Table 2: Number and Percentage of Ileostomy Cases Based on Hospitalized Patients**

Ileostomy Cases	Number of Patients	Percentage
Hospitalized	4,575	100%
Ileostomy	50	1.09%

Table (2) shows the number and percentage of ileostomy cases among hospitalized patients. Out of a total of 4,575 hospitalized patients, only 50 patients (1.09%) underwent an ileostomy procedure.

**Table 3: Number and Percentage of Ileostomy Cases Based on Patients with Acute Abdominal Condition Who Underwent Emergency Surgery**

Abdominal Condition	Number of Patients	Percentage
Acute Abdominal	2,268	100%
Ileostomy	50	2.20%

Table (3) shows the number and percentage of ileostomy cases among patients with acute abdominal conditions who underwent emergency surgery. Out of a total of 2,268 patients who were admitted with acute abdominal conditions and underwent surgery, 50 patients (2.20%) received an ileostomy procedure.

**Table 4: Number and Percentage of Ileostomy Causes**

Ileostomy Causes	Number	Percentage
Intestinal Obstruction and Gangrene	16	32%
Traumatic Abdominal Injury	15	30%
Burns	8	16%
Abdominal Distension	4	8%
Tuberculosis	2	4%
Peritonitis and Intestinal Perforation	2	4%
Abdominal Incision Wounds	1	2%
Previous Anastomosis Leak	1	2%
Tumors	1	2%
<b>Total</b>	<b>50</b>	<b>100%</b>

Table (4) shows the number and percentage of causes for ileostomy. The findings indicate that the most common causes of ileostomy were intestinal obstruction with gangrene (32%) and traumatic abdominal injury (30%), followed by burns (16%), abdominal distension (8%), tuberculosis (4%), peritonitis and intestinal perforation (4%), abdominal incision wounds (2%), previous anastomosis leak (2%), and tumors (2%).

**Table 5: Number and Percentage of Ileostomy Types**

Type of Ileostomy	Number	Percentage
Loop Ileostomy	37	74%
End Ileostomy	8	16%
Mikulicz Ileostomy	5	10%
<b>Total</b>	<b>50</b>	<b>100%</b>

Table (5) shows the number and percentage of ileostomy types among patients. As indicated in the table, the most common type of ileostomy performed was loop ileostomy (74%), followed by end ileostomy (16%), and Mikulicz ileostomy (10%).

**Table 6: Number and Percentage of Patients by Gender**

Gender	Number	Percentage
Male	33	66%
Female	17	34%
<b>Total</b>	<b>50</b>	<b>100%</b>

Table (6) shows the number and percentage of patients by gender. The findings indicate that out of the 50 patients, 33 were male and 17 were female, representing 66% and 34%, respectively.

**Table 7: Descriptive Statistics of Ileostomy Patients Based on Place of Residence**

Place of Residence	Number	Percentage
Mazar-e-Sharif City	8	16%
Districts of Balkh Province	23	46%
Other Provinces	19	38%
<b>Total</b>	<b>50</b>	<b>100%</b>

Table (7) presents the descriptive statistics of ileostomy patients based on their place of residence. Among the 50 patients, 8 resided in Mazar-e-Sharif city, 23 were from

districts of Balkh province, and 19 were from other provinces, representing 16%, 46%, and 38%, respectively.

**Table 8: Descriptive Statistics of Patients by Age**

Age Group	Number	Percentage
1-10	2	4%
11-20	14	28%
21-30	10	20%
31-40	9	18%
41-50	6	12%
51-60	5	10%
61-70	4	8%
<b>Total</b>	<b>50</b>	<b>100%</b>

Table (8) presents the age distribution of patients. The findings indicate that among the 50 patients, 2 were aged 1-10 years, 14 were aged 11-20 years, 10 were aged 21-30 years, 9 were aged 31-40 years, 6 were aged 41-50 years, 5 were aged 51-60 years, and 4 were aged 61-70 years.

**Table 9: Number and Percentage of Ileostomy Patients Who Experienced Complications**

Category	Female	Male	Total
Total Ileostomy Patients	17	33	50
Patients Who Experienced Complications	3	10	13
Percentage (%)	17.6	30.3	26

Table (9) illustrates those 13 patients who underwent ileostomy experienced complications. Among the 33 male patients, 10 developed complications, while among the 17 female patients, complications occurred in 3 cases.

**Table 10: Complications Experienced by Ileostomy Patients**

Ileostomy Complications	Total	Percentage (%)
Peristomal Skin Excoriation	6	46.1
Retraction	1	7.69
Edema	2	15.38
Surgical Site Infection	3	23.07
Ileus	1	7.69
<b>Total</b>	<b>13</b>	<b>100</b>

As shown in Table (10), peristomal skin excoriation was the most common complication among ileostomy patients (46.1%), followed by surgical site infection (23.07%), ileostomy edema (15.38%), and ileus (7.69%).

**Note:** Three patients experienced more than one complication simultaneously:

- **Patient 1:** Surgical site infection, minor pinpoint bleeding, and edema.
- **Patient 2:** Skin excoriation and retraction.
- **Patient 3:** Skin excoriation, pinpoint bleeding, and edema.

**Table 10: Ileostomy Complications by Gender**

Ileostomy Complications	Female	Male
Peristomal Skin Excoriation	2	4
Retraction	0	1
Edema	1	1
Surgical Site Infection	0	3
Ileus	0	1
Total	3	10

As seen in Table (10), among 13 patients who experienced complications:

- Peristomal skin excoriation was observed in 2 females and 4 males.
- Retraction occurred in 1 male.
- Edema was seen in 1 female and 1 male.
- Surgical site infection affected 3 males.
- Ileus was reported in 1 male.

## CONCLUSION

This study examines the causes, types, complications, and characteristics of ileostomy patients at Abu Ali Sina Regional Teaching Hospital. The results indicate that ileostomy is more prevalent among hospitalized patients, especially in acute abdomen cases, compared to general hospital admissions. Among the studied cases, the most common reasons for ileostomy were small bowel obstruction with gangrene and abdominal gunshot wounds.

Additionally, loop ileostomy was the most frequently performed type, likely due to its simplicity and clinical effectiveness. The study also found that ileostomy was more common among males than females and was most frequently performed in younger age groups. These findings highlight the need for special attention to certain age groups and gender differences in managing ileostomy patients. Furthermore, postoperative complications, particularly peristomal skin excoriation and surgical site infection, were the most frequent issues encountered. These complications emphasize the necessity for proper follow-up and specialized post-surgical care to improve patient outcomes.

Ultimately, this study emphasizes the importance of patient and healthcare staff education and

awareness, regular follow-up of ileostomy patients, and improving access to treatment services. Additionally, the establishment of specialized centers for the treatment and management of ileostomy patients, as well as further research on optimal surgical techniques and complication management, can contribute to enhancing the quality of care for these patients.

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