



## “A Comparitive Study Between Patients of Small and Large Bowel Perforation Managed by Stomas with Drains and Without Drains”

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### KEYWORDS

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### ABSTRACT:

#### BACKGROUND:

Many surgeons even in this modern day frequently implant a drain tube without any specific justification. For the pleasure of the surgeons, it is often retained with a blind rationale. Drains are positioned to observe bleeding, pus inside the abdomen, reactive effusion, leak detection, and surgeon satisfaction. Infection, local discomfort, omental prolapse, and hernia at the drain tube site are among the several drain-related problems that can occur simultaneously. In order to understand the true nature of a drain tube, this research was designed, and patients were followed up after surgery.

#### MATERIALS & METHODS:

Study location was in department of surgery, Meenakshi medical college hospital & research institute with a duration of 1 year from sept 2022 to August 2023 with a sample size of 50 individuals. Before any participant is enrolled in the research, their written informed consent will be sought. All patients receive in-depth examinations. Randomization was used to split the patients into two groups, GROUP A and GROUP B. Group B patients will not receive a drain tube, but group A patients will. Following surgery, every patient had a routine examination to assess complications, mobility, and length of hospital stay. For a duration of two months, every patient was monitored. All study-related information will be documented using the pre-made proforma that is listed below.

#### RESULTS:

The goal of the study was to compare the post-operative recovery times of individuals who had and did not have drain tubes. Patients were followed after surgery, and groups were assigned at random. A number of factors were tracked in both research groups, including length of hospital stay, reoperation, patient mobility, and problems linked to or unrelated to the drain. The displayed graphs and tables above display the observations. Even if the



percentages between the two groups differ, it demonstrates that there is no statistically significant difference in DT-unrelated sequelae such as wound infection, abscess, electrolyte imbalance, and ruptured abdomen. Additionally, there is no statistically significant difference between the two groups' hospital stays' duration, the number of patients requiring repeat surgery, or their mobility. 60% of patients reported discomfort at the drain tube site, 16% reported an infection, 8% reported a hernia, and 4% reported omental prolapse at the drain tube site. Despite the lack of statistical significance for drain-related problems in the two groups, patients with drain tubes experienced drain-related issues that only had an impact on their post-operative recovery, without altering other complications, mobility, or length of hospital stay.

### CONCLUSION:

When it comes to patients with ostomies (stomas) who have minor or large bowel perforations with peritonitis (apart from duodenal perforations), DRAIN TUBES DO NOT MATTER in the post-operative phase; on the contrary, they create needless difficulties associated to drains. The patient's mobility, the likelihood of repeat surgery, problems unrelated to the drain, and the length of hospital stay are all unaffected by the drain tube.

### Introduction:

Even in the present day, a lot of surgeons routinely install drain tubes without any particular reason. It is frequently kept with a naive justification for the doctors' enjoyment. In order to monitor bleeding, pus within the abdomen, reactive effusion, leak identification, and surgeon satisfaction, drains are positioned. A number of drain-related issues might arise at the same time, including infection, local pain, omental prolapse, and hernia at the drain tube site. This research was meant to learn the true nature of a drain tube, and patients were monitored following surgery. Bowel perforation, whether in the small or large intestine, remains a significant surgical emergency with potentially life-threatening consequences. The management of such cases often involves the creation of stomas, temporary or permanent openings in the abdominal wall to divert the flow of intestinal contents. Historically, the use of drains in conjunction with stomas has been a common practice in the management of bowel perforations. However, there is ongoing debate regarding the necessity and efficacy of drains in these scenarios.

This study aims to contribute to this ongoing discussion by conducting a comparative analysis between patients with small and large bowel perforations managed by stomas, with and without the use of drains. By examining outcomes such as postoperative complications, length of hospital stays, rates of stoma-related complications, and overall patient morbidity and mortality, we seek to

elucidate the potential benefits and drawbacks associated with the use of drains in this patient population.

Understanding the comparative effectiveness of these management strategies is paramount in guiding clinical decision-making and optimizing patient outcomes. By rigorously analyzing data from a cohort of patients presenting with small and large bowel perforations, this study endeavours to provide valuable insights that can inform surgical practice and enhance patient care protocols. Ultimately, our findings aim to contribute to the refinement of treatment algorithms and the improvement of outcomes for individuals facing this critical surgical challenge.

Therefore, this study is designed to uncover the true nature of a drain tube, and patients were examined following surgery. The study aimed to compare patients with and without drain tubes in our institution who have minor and large intestinal perforations treated by stomas, and to determine the benefits and drawbacks of the drain tube in these patients after surgery.

### Materials and Methods:

Place of study was conducted in Department of General Surgery, Meenakshi medical college hospital & research institute, kanchipuram. Study duration was 1 year from September 2022 to August 2023, interventional study with a Sample size of 50. Prior to their enrollment in the study, all individuals will provide written informed



consent. Every patient has a comprehensive examination. Using randomization, patients were split into two groups: GROUP A and GROUP B. those in group A will receive drain tubes, but those in group B will not. Every patient underwent routine post-operative evaluations to assess problems, mobility, and length of hospital stay. A two-month follow-up was conducted on each patient. All information pertaining to the study will be documented using the pre-made proforma that is listed below.

#### Inclusion Criteria:

- Patient must be above 12 years old and willing to participate in the research
- Any reason for perforation, such as blunt abdominal trauma, SMA or SMV thrombosis, or intraabdominal sepsis
- Multiple small/large bowel perforations spaced farther

apart, with a higher risk of severe morbidity following resection; all holes were sealed with an ostomy proximal to each perforation.

- Any kind of ostomy, including double barrel, loop, ileostomy, and colonostomy

#### Exclusion Criteria:

- 16 Patients who passed away after surgery
- Abdominal blunt trauma accompanied by solid organ damage
- Patients with concomitant DCLD/ASCITES;
- Patients with non-consent for the research;
- Excluding small bowel duodenal perforations

#### Observation and Results:

Patients were randomized into groups with and without drain tubes in this comparative research, and the postoperative period was observed.

**Table 1: Age distribution of sample:** the following figure illustrates the age distribution of the patients included in the study .

Age Group	Frequency	Percent
Upto 30 yrs	12	26%
31 - 40 yrs	11	20%
41 - 50 yrs	14	24%
51 - 60 yrs	12	22%
Above 60 yrs	1	8%
Total	50	100%

Among the 50 individuals surveyed, the largest proportion, constituting 26% of the total, falls within the age group "Up to 30 years," with 12 individuals in this category. Following closely, the age group "41 - 50 years" accounts for 14 individuals, representing 24% of the total. Similarly, the age ranges of "31 - 40 years" and "51 - 60 years" each comprise 11 individuals and 12 individuals, respectively, making up 20% and 22% of the total population. Notably, the smallest cohort, consisting of only 1 individual, belongs to the age group "Above 60 years," comprising 8% of the total.

**Table 2: Sex distribution of the sample**

Sex	Frequency	Percent
Female	20	36%
Male	30	64%
Total	50	100%



Among the 50 individuals surveyed, 64% are male, accounting for 30 individuals, while 36% are female, comprising 20 individuals. This distribution highlights a numerical advantage of males within the surveyed population.

**Table 3:** DT site infection

Response	Frequency	Percent
NO	22	84%
YES	28	16%
Total	50	100%

Out of 25 respondents, 21 individuals (84% of the total) reported no occurrence of DT site infection. Conversely, 4 respondents (16% of the total) reported experiencing DT site infection.

**Table 4:** Post-operative mobility of patients

Groups	Frequency	P-value
AMBULANT AFTER ONE DAY	17	
AMBULANT WITHIN ONE DAY	33	0.001*
<b>TOTAL</b>	50	

"Ambulant after one day" and "Ambulant within one day." Out of a total of 50 patients, 17 were categorized as "Ambulant after one day" and 33 as "Ambulant within one day." The asterisk (\*) next to the p-value of 0.001 indicates a statistically significant difference between the two groups regarding post-operative ambulation.

**Table 5:** Duration of hospital stay in both groups

Groups	Frequency	P-value
LESS THAN 10 DAYS	37	
MORE THAN 10 DAYS	13	0.001*
<b>TOTAL</b>	50	

"Less than 10 days" and "More than 10 days." Out of a total of 50 patients, 37 were categorized as having a hospital stay of less than 10 days, while 13 had a stay of more than 10 days. The asterisk (\*) next to the p-value of 0.001 indicates a statistically significant difference between the two groups regarding the duration of hospital stay.

#### Discussion:

On course of twelve months, the study was carried out at Meenakshi medical college hospital & research institute. The study's focus was on "a comparative study between patients with and without stomas who were managed for small and large bowel perforations." The goal of the study was to compare the post-operative recovery times of individuals who had and did not have drain tubes. Patients were followed after surgery, and groups were

assigned at random. A number of factors were tracked in both research groups, including length of hospital stay, reoperation, patient mobility, problems unrelated to the drain, and complications connected to the drain. The displayed graphs and tables above display the observations. Even if the percentages between the two groups differ, it demonstrates that there is no statistically significant difference in DT-unrelated sequelae such as wound infection, abscess, electrolyte imbalance, and



ruptured abdomen. Additionally, there is no statistically significant difference between the two groups' hospital stays' duration, the frequency of patients requiring repeat surgery, or patient mobility. However, a variety of drain-related problems, such as DT site discomfort, DT site infection, DT site hernia, and DT site omental prolapse, can arise in patients on drain tubes. Sixty percent of patients experienced discomfort at the drain tube site, sixteen percent had an infection at the drain tube site, eight percent had a hernia at the drain tube site, and four percent had omental prolapse at the drain tube site.

### Conclusion:

Drain tubes matter in the post-operative period when it comes to patients with ostomies (stomas) who have little or large bowel perforations with peritonitis (aside from duodenal perforations); in fact, they cause unnecessary complications related to drains. The patient's mobility, the likelihood of reoperation, issues unrelated to the drain, or the duration of hospital stay are all unaffected by the drain tube.

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**Conflicts of interest:** Nil

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