

**Observational Study of Intestinal Stoma Performed at Tertiary Care Centre****Dipali G Thakker<sup>1</sup>, Deepak J Vora<sup>2</sup>, Shashikant V Umraniya<sup>3</sup>, Vishal Solanki<sup>4</sup>**<sup>1</sup>3<sup>rd</sup> Year Surgical Resident, SCL Hospital, Ahmedabad<sup>2</sup>Associate Professor, SCL Hospital, Ahmedabad<sup>3</sup>Assistant Professor, SCL Hospital, Ahmedabad<sup>4</sup>2<sup>nd</sup> Year Surgical Resident, SCL Hospital, Ahmedabad

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Corresponding Author: Dr. Deepak J Vora

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**Abstract:**

Intestinal stoma is a surgically created opening in the bowel that allows the diversion of bowel contents. A study is performed to describe the various indication for which stoma is performed electively or performed as a emergency procedure at tertiary care centre. The common type of intestinal stomas are ileostomy and colostomy. Each of these are performed for a different type of aetiology to divert the faecal matter. It could be temporary to facilitate healing by giving rest to the distal part of the intestinal or permanent if the complete resection is performed and reanastomosis is not possible, depending upon the underlying medical conditions and the outcome of the patient. Research is performed to study about the different aetiology for which stoma is performed and type of stoma given for the same including every age group performed in a tertiary care centre

**Aim and Objective:** Aim of the study is to study the various indication of stoma and type of stoma performed as emergency procedure or elective procedure at tertiary care centre.

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**Introduction**

A stoma is a planned opening which is made in the colon to divert faeces and flatus through the abdominal wall, where they can be collected in an external appliances. The opening is mouth like to the exterior of the abdominal wall so as to drain content from the tubular structure inside like intestine. [1]

Depending on there function there are two basic types of stoma. Temporary and permanent where temporary is to facilitate healing by giving rest to the distal part of the intestine ,and permanent is given if complete resection is performed and re anastomosis is not possible. [2]

Stomas are also classified as loop, end stoma or double barrel. Where loop stomas are performed to reanastomosis the bowel after the cause of construction is cured, double barrel stoma is given if resection of bowel has occurred and patient is too ill to undergo a safe reanastomosis. And end stomas are given if reanastomosis is not possible at all. [3]

There are various indication for which stomas are given including mainly the infective aetiology causing various size of multiple hollow viscus perforation, carcinomas, appendicular lump, obstruction, inflammatory bowel disease and perianal/perineal trauma and others include the

revision surgery for anastomotic leak, any congenital anomalies and perianal disease etc. [4]

**Method and Materials**

This is the observational and prospective study which is performed in department of general surgery of NHL medical college and research centre.

The study consist of 30 patents with detailed assessment for various indication of stoma, different types of stoma, whether emergency or elective procedure performed at our institute, which include the patient of all age group. [5]

Clinical details like indication and diagnosis of stoma formation with associated comorbidities and all the preoperative, intraoperative and postoperative data are collected.

Categorisation of cases are done according to the Various indication for stoma creation

Different age of patient

Sex of patient

Type of stoma

Emergency or elective procedure

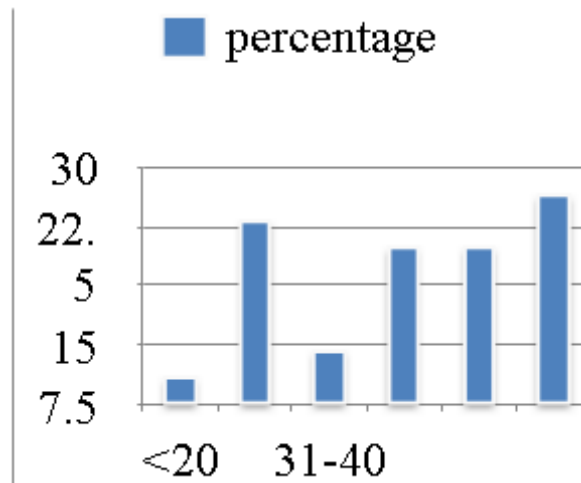
Different pathology

**Results**

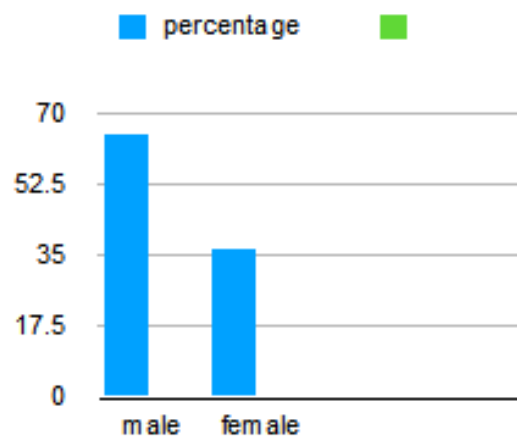
In our study, the total number of patient taken was 30 with majority of them are the local residents, resides in the area near the institute. With different age group, most of them are between 20-30 and 41-

55 age group with more than half of them are males and rest are females (figure 2.)

Breakdown of different age groups are depicted in figure 1.



**Figure 1: No of cases in different age groups**



**Figure 2: Distribufon according to gender** Based on the study we made the observation that,

The most common indication for stoma formation is infective aetiology causing intestinal perforation accounting for 53.33% of total cases, the other indication are appendicular lump, intestinal obstruction, carcinomas, trauma and others accounting for rates of 10%, 6.67%, 6.67%, 3.33%, and 20% respectively. Out of this performed stoma 53.33% are loop ileostomies and out of rest of them

half are double barrelled and half are colostomy. 94% of them are temporary stomas planned to reanastomosis later and only 6% are of permanent type.

Chart which provide the visual representations of data distribution of different indication and temporary vs permanent stoma are given below in figure 3.

Breakdown of different indication of stoma

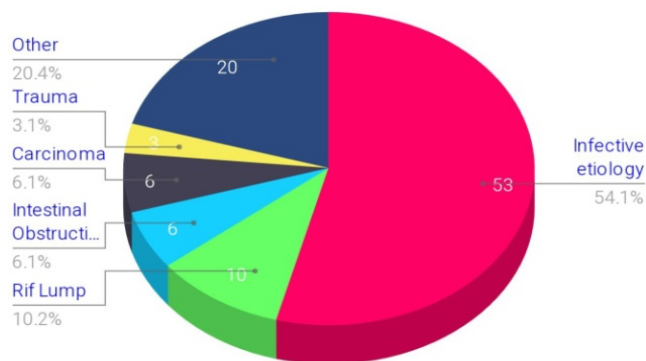


Figure 3: Breakdown of different indication of stoma

**Discussion**

Stoma is routinely performed surgery for various indication including infective aetiology causing intestinal perforation, intestinal obstruction, carcinoma, appendicular lump, trauma and others. It could be either permanent or temporary depending over the diagnosis and patient condition. Various types of stomas (loop, double barrel, end. Figure 4.) are performed depending upon the indication. [6-8]

Different aetiology for which stomas are performed are discussed below

- Infective Etiology Causing Intestinal Perforation:** various bacteria, viruses or parasite causing infection of gastrointestinal tract followed by damage to the mucosal lining leading to the ulceration and ultimately perforation of intestine. Out of them tuberculosis and typhoid are the leading cause of infection causing intestinal perforation. Most of them are due to poor hygiene, contamination of food and wa-

ter, and lack of basic medical education and treatment.

- Appendicular Perforation:** Sometime due to ruptured appendicitis severe inflammation leading to caecal perforation. Temporary stoma is given to relieve inflammation.
- Intestinal Obstruction:** Not all the cases of intestinal obstruction require the stoma. It is performed only in severe and complicated cases where it offers significant benefit and decrease complications .e.g. obstruction due to malignancy, recurrent malignancy or strangulation or perforation.
- Carcinoma:** Sometime the growth which is present over bowel may cause obstruction require stoma after resection of growth if distal anastomosis is not possible to allow the passage of the faecal matter. Sometime the resection of complete growth is not possible so stoma is given as a part of palliative care to relive the symptoms and improve the quality of life.

Different Type of Stoma

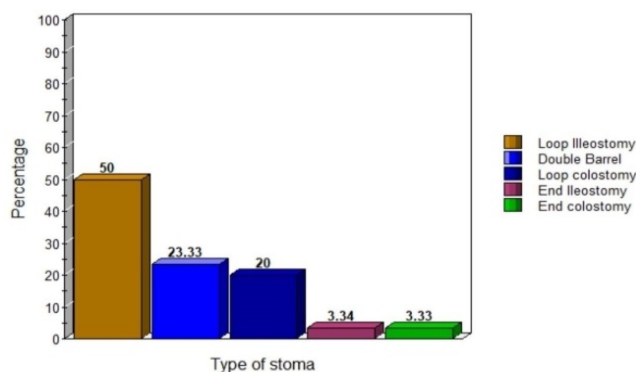


Figure 4: Percentages of different types of stoma.

- Trauma-** trauma to the abdomen can sometime require the formation of the stoma especially if the bowel is involved directly or there are

severe injury to abdominal organs. trauma may lead to bowel perforation, extensive bowel

resection or ischemia to the bowel for which stoma is performed sometime.

- Other- causes requiring stoma formation other than mentioned above are like inflammatory bowel disease, diverticulitis, radiation enteritis, familial adenosis polyposis, revision surgery for anastomotic leak, high output fistula etc. are also there.

### Complication

Complications of stoma is more common. Vast majority of these complications can be dealt by a suitably experienced person or nurse. Which include Skin irritation (most common) (table 1.)

Stenosis  
Prolapse  
Parastomal hernia  
Retraction  
Bleeding  
Ischemia  
Fistulation

**Table 1: Frequency of complications**

Complications	%
<b>Skin irritation</b>	64%
<b>Electrolyte imbalance</b>	15%
<b>Bleeding</b>	10%
<b>Prolapse</b>	6%
<b>Retraction</b>	2%
<b>Parastomal hernia</b>	2%
<b>Others</b>	1%

### Conclusion

From the above study it was found that the infective cause of intestinal perforation is the most common indication for the stoma formation due to severe inflammation which cause anastomosis difficult and for that stoma is performed to facilitate the healing. Intestinal obstruction, carcinoma and trauma are also the leading indication for which the stoma has to performed.

Non-availability of good quality food and water, poor hygiene, poverty and lack of basic medical knowledge will lead to gastrointestinal infection like typhoid and tuberculosis which are the leading culprit for hollow viscus perforation where stoma performed to give time to decrease inflammation along with antibiotics

Improving life style, hygiene, education, collaboration of government and NGO for awareness of disease ,early detection and treatment

and media campaign are the mainstay to decrease transmission are the requirement.

### Reference

1. Sabiston textbook of surgery, 21<sup>st</sup> edition
2. Bailey & love's short practice of surgery, 28<sup>th</sup> edition.
3. Farquharson's textbook of operative general surgery, 10<sup>th</sup> edition.
4. Standards development committee of the United ostomy association. National guidelines for enterostomal patient education. Dis colon rectum. 1994;37:559-63.
5. SRB's manual of surgery, 7<sup>th</sup> edition.
6. Hellman J, Lago cp. Dermatological complications in colostomy and ileostomy patient. Int J Dermatol. 1990;29:129-33.
7. Taylor p. An introduction to stomas: reasons for their formation. Nurs times. 2005; 101(29): 63-64.
8. Saunders RN and Hemingway D. intestinal stomas. Surg int. 2005;71:44-47.