

A Study Of Series Of Patients Of Parastomal Hernia In A Tertiary Care Centre In Asia

¹Mohammad Afzal-ud-Din, ²Mohammad Muttahir uddin, ³Naseer Ahmed Awan, ⁴Mufti Mahmood Ahmed, ⁵Shugufta Aziz, ⁵Syed Badir Duja, ⁵Quratul Ain,

¹MBBS, MS, MRCS, ^{2,5}MBBS, ³MBBS, MS, ⁴MBBS, MS, M Ch,

¹Consultant (Lecturer), ²Resident, ^{3,4}Professor, ⁵General Practitioner

^{1,3,4}Department Of General And Minimally Invasive Surgery, Govt Medical College, Srinagar

²Department of SPM, Govt Medical College, Srinagar.

***Corresponding Author:**

Dr. Mohammad Afzal ud din

Lecturer, Department of surgery, Government Medical College, Srinagar

Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Aim= the aim is to study the profile and outcome of various such patients, who had parastomal hernia.

Material and methods= All the patients who had an intestinal stoma who came to our clinic between april 2019 to march 2021 were made part of the study.No age bar was put. Both colostomy and ileostomy were included. Fresh stomas made were also included.

Results = we have recorded 36 such patients who had colostomy or ileostomy. We found that ileostomy was in 20 and 16 had colostomy. Parastomal hernia was found in 18 patient with stoma. Out of those who had parastomal hernia one patient underwent repair by mesh hernioplasty, 2 underwent repair of hernia (without mesh), 2 patients were treated by relocation of stoma. The stoma was closed by restoration of continuity in 10 patients. 3 patients preferred to continue with hernia or wait till next decision by the patient. Regarding the 18 patients who had no parastomal hernia, they stood in the queue for restoration of continuity and in this period 8 patients got their surgery done and continuity restored. 07 patients are waiting in the pipeline for surgery as soon as possible.

Conclusion = since this complication of parastomal hernia is very common in case of stoma surgery, measures should be taken at the time of making the stoma to avoid this complication.

Keywords: Ileostomy, colostomy, parastomal hernia, repair, mesh

Introduction

Since this complication (parastomal hernia) of intestinal stoma adds to the morbidity it is a must for all surgeons to know its various pros and cons.

Material and methods

All the patients with stoma who came to our clinic between April 2019 to March 2021 were made part of the study. No age bar was put. Both colostomy and ileostomy were included. Fresh stomas made were also included.

Results

All the results are shown in tables. Table 1 shows the ratio of colostomy versus ileostomy. Table 2 shows reason for creating a stoma. Table 3 shows the incidence of hernia in various stoma patients. Table 4 shows the treatment given to those 18 pts who had a parastomal hernia. Table 5 shows the treatment given to those 18 patients who had no parastomal hernia. The sole patient who underwent mesh repair for parastomal hernia has been doing well over last 2 years. We have one patient who had a recurrence of parastomal hernia after relocation of the stoma site (as shown in table 6)

Table 1 showing the number of patients with various types of stoma

Type of stoma	Number	Percent
Ileostomy	20 out of 36	55
Colostomy	16 out of 36	45

Table 2 showing the reason for stoma

Reason for stoma	Number	Percent
Diverticuli	9	25.00
Trauma	7	19.45
Hernia	9	25.00
Band	4	11.10
Malignancy	7	19.45
Total	36	100

Table 3 showing the incidence of parastoma hernia in various types of stoma.

Presence of parastomal hernia	Number	Percent
Ileostomy	16 out of 20	80
Colostomy	9 out of 16	56
Total	25 out of 36	69

Table 4 showing the treatment given to 18 patients who had parastomal hernia.

Treatment	Number	Percent
Stoma reversal with restoration of continuity	10	56
Relocation	2	11
Repair	2	11
Mesh	1	5
No treatment yet	3	16

Table 5 showing the treatment given to those 18 patients who had no parastomal hernia.

Status of the patient with stoma	Number	Percent
Restoration of continuity done	8 out of 18	44

Waiting for surgery	7out of 18	38
Died	3out of 18	16

Table 6 showing recurrence of parastomal hernia in those patients who underwent relocation of stoma site

Recurrent parastomal hernia after Management by relocation	Number	Percent
Recurrence of parastomal hernia	1 out of 2 patients	50
No recurrence of parastomal hernia	1 out of 2 patients	50

Discussion

Stoma creation is a life saving procedure sometimes with an increasing trend in the surgical world. The first formal colostomy was created in 1887 by Allingham by suturing seromuscular layer to the skin(1).Before that there were accidental stoma created and concept had evolved. It needs a proper reversal to restore the continuity of intestines except in those cases where it is permanent like in the case of colotomy of APR.It is estimated that 40-60 percent of patients with a stoma will never undergo a reversal procedure(2).

We have studied the various aspects of a parastomal hernia in our series.Parastomal hernia is an incisional hernia located at or immediately adjacent to a stoma. Some authors define a parastomal hernia as a hernia there as a palpable bulge at the ostomy site upon a valsalva maneuver(3,4).

Parastomal hernia develops in approximately 78 percent of patients with stoma. Goligher even went to claim that some degree of parastomal hernia is inevitable if enough follow up time is given(5). In our series we found that even after relocation of stoma (treting the parastomal hernia), recurrence was 50 percent.

There are certain potential problems associated with any stoma like leakage, dehydration, prolapse, hernia etc . Out of thse parastomal hernia is the most common and the most significant (6,7,8). Parastomal herna is a problem because of its morbidity like skin irritation.

Parastomal herna are treated by stoma reversal or stoma relocation or fascial repair. It has been found that repair with relocation was superior to simple fascial repair with recurrence rates of 33 and 76 percent respectively(9)

Mesh repair , first done in 1977(10),is now the gold standard for treatment of symptomatic parastomal hernia. It has low recurrence rate.Synthetic mesh like polypropylene were in vogue in the past, but due to problems of fistula formation by mesh erosion into the bowel(11), and fomations of dense adhesions the prolene has fallen into disreputer. This was to be replaced by PTFE or biologic mesh. PTFE is better material but it has property to shrink leading to chances of recurrence(12).

Biological meshes have been used now in a potentially contaminated field.

Recently as low as 3 percent cases have shown mesh infection after mesh repair Following psh repair (13). It has been postulated that specific factors associated with mesh infection include smoking, obesity, older age, emergent repair and longer operative time(14).we have treated one patient by mesh placement . we found that the patient is doing well for many years.

Simple fascial repair and stoma translocation should be avoided due to high recurrence. Open and laparoscopic mesh placement are effective(15). Biological mesh should be reserved for use in contaminated fields.

Since the cancer surgery technique and survival is improving, it has been estimated that the number of ostomies will grow at an annual rate of 3 percent in usa(16).

Regarding prevention, timely restoration of continuity, when possible reduces the risk of psh drastically. prophylactic mesh placement appears to be very effective also. It seems that Prophylactic mesh placement is reasonable in patients with permanent colostomy(17).

In our series a good percentage of patients did not get operated for parastomal hernia probably because of many factors, the important being that the symptoms are not very severe. It has been reported that while most patients have symptoms related to psh, only 30

percent of patients have symptoms severe enough to undergo operative procedure(18). In our series We have not done any prophylactic mesh placement at the time of hernia to prevent recurrence.

Conclusion

The incidence of parastomal hernia is high in all kinds of intestinal stoma. The restoration of continuity of intestines , if possible, is the best method of prevention and treatment. In addition to that placement of mesh is the gold standard of treatment.

References

1. Arnison WC; Remarks on colostomy, British Medical journal ,1889; 1 ;295-296
2. Husain SG, Cataldo te; Late stomal complications.; clinics in colon and rectal surgery ; 2008; 21; 31-40
3. Williams JG, Etherington R, Hayward M W, Hughes L E ;Parailiostomy hernia; a clinical and radiological study; British journal of Surgery ; 1990 ;77;1355-57
4. Moreno –Matias J, Serra-Aracil X, Darnell-Martin A, etal ; The prevalence of parastomal hernia after formation of an end colostomy. A new clinicoradiological classification. Colorectal disease , 2009 ; vol 11 , issue 2 ;173-177
5. Goligher JC, Duthie HL , Nixon HH; Surgery of the anus,rectum and colon; London :Bailliere Tindall, 1984

6. Londono-Schimmer EE, Leong A P, Philips R K, ; Life table analysis of stomal complications following colostomy.. Diseases of Colon and Rectum ; 1994;37;916-920
7. Nastro P, Knowles C H, Mcgrath A, etal, complications of intestinal stomas. British journal of surgery, 2010, ;97;1885-1889
8. Randall J, Lord B, Fulham J, Soim B ; parastomal hernia as the predominant stoma complication after laparoscopic colorectal surgery; Surgical laparoscopy endoscopy and percutaneous techniques, 2012,;22;420-423
9. Rubin MS, Schoetz DJ jr, Mathews JB; Parastomal hernia: is stoma relocation superior to fascial repair? Archives of surgery , 1994;129;413-418 discussion 418-419.
10. Rosin J D, Bonardi R A, ; Paracolostomy hernia repair with a Marlex mesh; a new technique. Diseases of Colon and Rectum; 1977;20;299-302
11. Aldridge A J, Simson JN; Erosion and perforation of colon by synthetic mesh in a recurrent paracolostomy hernia; Hernia 2001, 2001;5;110-112
12. Hansson B M, Bleichrodt R P, de Hingh I H ;Laparoscopic parastomal hernia repair using a keyhole technique results in high recurrence rate. Surgical Endoscopy; 2009;23;1456-1459
13. Hansson B M E, Slater N J, van der Velden A S etal, Surgical techniques for parastomal hernia repair; a systemic review of literature, Annals of Surgery ; 2012 ,255,;685-695
14. Mavros MN, Athanasiou S, Alexiou VG etal ; Risk factors for mesh related infections repair surgery; a meta –analysis of cohort studies. World Journal of Surgery, 2011;35;2389-2398
15. Parastomal hernia; a growing problem with new solutions; AquinaCT, Ianuzzi JC, Probst CP, Kelly KN, Noyes K, Fleming FJ, Monson JRT,;Digestive Surgery 2014,31;366-376
16. Turnbull GB ; Ostomy statistics; 64000 dollar question. Ostomy/ wound management 2003 ; 49;22-23
17. Aquina C T , Lannuzzi J C, Probst C P, Kelly K N, Noyes K, Fleming F J, Monson J R T; parastomal hernia; a growing problem with new solutions.; Digestive Surgery 2014,31; 366-376

18. Martin L, Foster G, Parastomal Hernia; Annals of Royal College of Surgeons of England 1996 ;78;81-8