



CLINICAL PROFILE AND MANAGEMENT OF LEFT COLONIC AND ANORECTAL STRICTURES –A SINGLE CENTRE STUDY

Gastroenterology

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ABSTRACT

The study aims to assess the etiology, clinical profile and management of left colonic and anorectal strictures. 30 patients were included in the study. A retrospective case note review was carried out in Kilpauk Medical College from January 2017 to December 2019. Out of 30 patients, 24 (80%) patients had anorectal stricture and 6 (20%) had left colonic stricture. The most common etiology identified was post surgical anastomotic strictures (53%). Out of 30, 24 (80%) patients underwent balloon dilatation. Among 24 patients, 12 (50%) patients had 1 dilatation, 8 (33%) patients had 2 dilatations, 3 (12%) patients had 3 dilatations and 1 patient had 4 dilatations. Study shows that left colonic and anorectal stricture was more common in the older age group and most common etiology was post surgical anastomotic stricture. Endoscopic balloon dilatation is an effective management of treating lower GI stricture.

KEYWORDS

Anorectal stricture, Balloon dilatation

INTRODUCTION

There has been an apparent increase in the incidence of lower gastrointestinal (GI) strictures in the recent years. These lower GI strictures may emerge as a cause of significant morbidity in the general population. Major causes of lower GI strictures include strictures secondary to carcinoma, post surgical anastomotic stricture, post radiation induced stricture, inflammatory bowel disease, post haemorrhoid surgery, diverticular stricture, ischemic colitis and infectious (pseudo membranous) strictures.

This can be a serious condition that may require endoscopic or surgical treatment. Despite being a serious condition, most strictures can be managed successfully with available treatment modalities. Endoscopic treatment has emerged as an effective alternative to surgery in the management of lower GI strictures. The first successful trial of balloon dilation of an upper gastrointestinal tract stricture was performed in the 1980s, and the same procedure was subsequently used to treat strictures of the lower gastrointestinal tract. Balloon dilation has been shown to be a convenient and effective method of treatment for most patients. Dilation can be combined with other procedures such as neodymium: yttrium–aluminum–garnet laser treatment, electroincision, electrocautery, and intralesional steroid injection. Besides balloon dilation, endoluminal colonic wall stents, self-expanding metallic stents (SEMS), and endoscopic transanal resection of strictures may also be used. Complications associated with these procedures include perforation and bleeding, technical failure, and stent migration.

AIM

Study of etiology, clinical profile and management of left colonic and anorectal strictures.

MATERIALS AND METHODS

Thirty patients between the age group of 30 to 70 years were included in the study. A retrospective case note review was carried out in Department of Digestive Health and Diseases, attached to Kilpauk Medical College over a period of three years from January 2017 to December 2019. Age less than 30 yrs and more than 70 yrs were excluded from the study.

All confirmed cases of left colonic and anorectal stricture by barium enema, CECT Abdomen and colonoscopy were included in the study. Data collected included patient demographics, clinical symptoms and management.

The distance of the stricture from the anal verge was measured during colonoscopic examination. Patients underwent endoscope-guided balloon dilation using a CRE- wireguided multidiameter balloon dilator (Microvasive, Boston Scientific Corp., Natick, MA). Success was defined as the anastomotic lumen being wide enough to allow passage of a standard 13-mm-diameter colonoscope after dilation and the disappearance of symptoms.

RESULTS

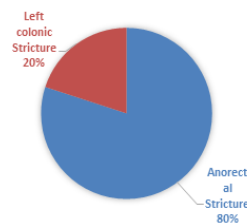
Number of patients included in the study - 30

SEX	NUMBER OF PATIENTS(%)
MALE	16(53)
FEMALE	14(47)

AGE GROUP

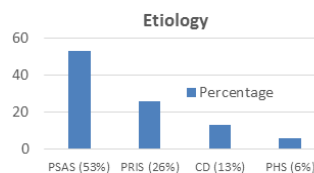
AGE RANGE	NUMBER OF PATIENTS(%)
50-70YRS	24(80)
40-50YRS	4(13)
30-40YRS	2(7)

SITE OF STRICTURES



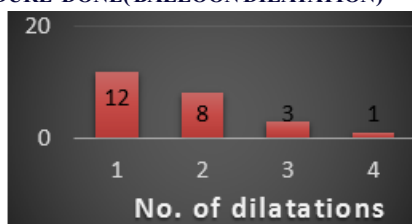
ANORECTAL STRICTURE - 24
LEFT COLONIC STRICTURE - 6

ETIOLOGY



PSAS-POST SURGICAL ANASTOMOTIC STRICTURES
 PRIS- POST RADIATION INDUCED STRICTURE
 CD- CROHNS DISEASE
 PHS-POST HAEMORRHOID SURGERY

PROCEDURE DONE(BALLOON DILATATION)



12 PATIENTS-1 DILATATION
 8 PATIENTS- 2 DILATATION
 3 PATIENTS- 3 DILATATION
 1 PATIENT - 4 DILATATION

DISCUSSION

A total of 30 patients were included in the study. Out of 30 patients, 16(53%) were males and 14(47%) were females.

Majority of the patients (24) were in the age group of 50 to 70 yrs(80%) among males and females. 4 (13%) were in the age group between 40 to 50 yrs and 2 (7%) were in the age group between 30 to 40 yrs. 24 (80%) patients had anorectal stricture and 6(20%) had left colonic stricture.

Among the study group, the most common etiology identified was post surgical anastomotic strictures(53%) followed by post radiation induced stricture(26%), Crohn's disease(13%) and post haemorrhoid surgery(6%). Most common cause of post surgical anastomotic strictures was low anterior resection of the rectum following carcinoma of rectum.

In patients with anorectal stricture, most common symptom was strenuous painful bowel movements(80%). Other symptoms included rectal bleeding, diarrhoea and incontinence. In patients with left colonic stricture, most common symptom was abdominal pain. Other symptoms were constipation and bloated abdomen.

Out of 30, 24(80%) patients underwent balloon dilatation. Among 24 patients, 12(50%) patients had 1 session of dilatation, 8(33%) patients had 2 sessions of dilatation, 3 (12%) patients had 3 sessions of dilatation and 1 patient had 4 sessions of dilatation.

Despite the simplicity and immediate efficacy of balloon dilatation in up to 80% of cases, this technique may require several treatment sessions and is associated with a significant rate of recurrent benign stenosis. Predictors of a successful outcome include: a relatively narrow stenosis (<10 mm), a short segment stricture (<4 cm), and anastomotic strictures. Poor predictors include: numerous strictures, complete obstruction, associated fistulas within the stricture, active inflammation around the stricture, recent surgery, a tight angulation, and malignancy.

Balloons usually exert a radial vector force against the strictured tissue, and these often require sequential dilation using a larger balloon over two to three endoscopic sessions in order to achieve long-term success. However, this may not be determined until the results of the first dilation are known.

Immediate relief of symptoms has been reported in 77% of patients and long-term relief in 44% of patients.

In our centre among 24 patients, 12(50%) patients had 1 session of dilatation, 8(33%) patients had 2 sessions of dilatation, 3(12%) patients had 3 sessions of dilatation and 1 patient had 4 sessions of dilatation. Majority of the patients were inflated up to 12-15 mm dilatation with 2-6 atm pressure for one minute. Most of them with post surgical anastomotic stricture improved with a single session of dilatation. One patient with Crohn's stricture underwent four sessions of dilations. Few patients did not come for follow up after first session of dilatation. Majority of the patients had recurrence of symptom after a mean of 10⁺ 4 months. There was no complications associated with

the procedure.

The following table shows a comparative analysis of the number of procedures done and the success rate for stricture dilatation in previous individual studies.

Study (first author)	Patients n	Type of dilatation	Success (%)	Average number of dilatations
Araujo, 2008 [5]	24	endoscopic	22 (92)	2.3
Di Giorgio, 2004 [6]	30	endoscopic	30 (100)	2.6
Venkatesh, 1992 [12]	17	endoscopic	16 (96)	—
Johansson, 1996 [9]	14	endoscopic	12 (86)	3.7
Skreden, 1987 [10]	12	endoscopic	10 (83.3)	2
Ambrosetti, 2008 [4]	12	endoscopic	12 (100)	1.4
Placer, 2010 [16]	26	endoscopic	23 (88.5)	2.0
Delaunay-Tardy, 2003 [13]	27	endoscopic	21 (77.1)	2.0
Pietropaolo, 1990 [12]	42	endoscopic vs. bougienage	41 (97.6)	—
Suchan, 2003 [15]	94	endoscopic & fluoroscopic	67% (63/94)	2.5

Araujo et al. reported no need for redilatation in 18 of 22 (81.8%) patients, with a follow-up of 2 years for each patient. The ultimate outcome of these redilations was not described.

Di et al. reported that there was no necessity for redilatation in 16 of 17 (94%) patients with an average follow-up period of 23 (range 1–62) months.

Venkatesh et al. reported initial successful dilatation in 24 of 25 (96%) cases, with no stricture recurrence at yearly endoscopic review in the 23 patients followed up, for 10, 7, 6 patients for >3, >2, 1 years respectively.

Suchan et al. and Delaunay-Tardy et al. showed that stricture dilatation was more successful in patients whose primary operation was for benign disease. Successful dilatation was seen in 59 and 61.5% in cancer resections and 88 and 92.8% in benign resections respectively.

CONCLUSION

This study shows that left colonic and anorectal stricture was more common in the older age group and the most common etiology was post surgical anastomotic stricture. Endoscopic balloon dilatation is considered as the first line treatment modality. Around three-quarters of patients referred and selected for this treatment will be satisfactorily managed by dilatation alone. Endoscopic dilation of colonic strictures offers many advantages over surgical management, including preservation of intestinal length. The procedure for balloon dilatation is quick, simple, and can be easily controlled by endoscopists.

Repeat dilations are often necessary, and the number of repeated dilations seems to vary between two and three or more. If a trial of several balloon dilations fails, the patient will need an alternative modality. Novel endoscopic techniques are emerging for the management of colorectal strictures. The secondary use of SEMS is also considered. It is safe and effective for the treatment of refractory colonic strictures, despite a high rate of spontaneous migration. In particular, the biodegradable stent is very safe and does not need to be retrieved because it will be degraded naturally with tissue reaction.

Combined investigational modality can also be considered if only one modality like balloon or SEMS cannot be performed due to a poor situation (e.g., numerous strictures). Wire guided balloon dilatation after use of a puncture needle, electroincision, TEM using balloon dilatation and combined techniques can be attempted.

These different treatments suggest that a single method is not adequate for all colorectal strictures. What is important is that the etiology and pathogenesis behind colorectal stricture should be analyzed, given the success rate of a nonoperative intervention method. Finally, surgical treatment is reserved for patients who fail all endoscopic remediation or those who are not candidates for endoscopic treatment.

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