The Research of Medical Science Review
ISSN: 3007-1208 & 3007-1216 Volume 3, Issue 5, 2025

FREQUENCY OF SOLITARY RECTAL ULCER SYNDROME AMONGST PATIENTS PRESENTING WITH LOWER GASTROINTESTINAL BLEEDING

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DOI: https://doi.org/10.5281/zenodo.15378255

Keywords
histological; clinical, Endoscopy; lower gastrointestinal bleeding; Solitary rectal ulcer syndrome

Article History
Received on 03 April 2025
Accepted on 03 May 2025
Published on 10 May 2025

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Abstract

Background: *The benign rectal illness known as solitary colorectal ulcer syndrome (SRUS), which is linked to a defecation issue, has diverse features on appearance, endoscopy, and histology, as well as multifactor diseases. Objective: The purpose of this study is to evaluate the histological, clinical, and endoscopic characteristics of SRUS in patients who have lower gastrointestinal bleeding.*

Material and methods: *This cross sectional single center study was carried out from January 2024 to June 2024 at Gastroenterology department, Bolan Medical Complex hospital, Quetta Balochistan after taking approval from ethical committee of the institute. International criteria were followed in order to prepare the patients for the colonoscopy. A video colonoscope (Japan, Tokyo), was used for all colorectal operations. SPSS version 24 was used to analyze all of the data that had been collected. All variables were then subjected to the post-stratification chi-square test, with a p-value of less than 0.05 being deemed statistically significant.*

Results: *Of the 17 (6.6%) individuals who had lower GI bleeding, 57% (n=11) were male and had SRUS. Frequent clinical observations were anemia, mucous discharge, loose stool, stomach discomfort, and perirectal hemorrhage. The most frequent presentations were: 17 (100% haemorrhage via rectum), 13 (76.4%) constipation, 8 (47%), straining, 8 (47%), mucous expulsion, 11 (64%), stomach discomfort, 2 (11%), and diarrhoea (2 (11.7%).*

Conclusion: *In our study, the frequency of solitary rectal ulcer syndrome was 6.6%, which is a low occurrence and the benign defecation condition was frequently accompanied by lower gastrointestinal hemorrhage, bloating, straining, and abdominal discomfort. It requires a methodical strategy that includes biofeedback, conservative treatment, medical care, and, as a last option, surgery.*

INTRODUCTION

Solitary rectal ulcer syndrome (SRUS) is characterized by bleeding from the rectal region, abdominal being full, and straining during feces. Incontinence, tenesmus, dischage of mucus, and intestinal discomfort are other less frequent symptoms. Although it appears to influence people of both sexes equally, women are slightly more affected than men. Progression of the rectal has also been linked to its occurrence. [1] The term "solitary rectal ulcer syndrome" is misleading because prior research revealed that insufficient granular hyperemic rectal tissue was found in 18 percent of cases, broad-based polypoid signs were found in twenty-five percent of cases, solitary ulceration was present just thirty-five percent of the time, and multiple "solitary" wounds appeared 22 per cent of the time. [2]. though it is well-known in adults, it is believed to be less common in children because to under- or incorrectly diagnosed conditions. Even with endoscopy, SRUS is frequently misdiagnosed at first as rectal cancer, mucosal colitis with ulceration, and Crohn's disease, particularly when polypoid ulcers are seen. [3]. Presenting symptoms, colonoscopy outcomes, and histological evidence of fibro-muscular demolition of the propria lamina are used to make the identification. Histopathology results distinguish tumours and inflammatory bowel disorder (IBD) from SRUS. Lamina propria scarring, a moderate inflammatory infiltration, and muscle hyperplasia are all seen on SRUS. [4] it has similar effect on both female.. The study of literature, still suggests that women predominance less. The literature on SRUS in both children and adults aims to treat the condition in a similar stepwise way, starting with conservative measures like patient education regarding dietary and behavioural modifications, moving on to topical treatment options like sucralfate and enema treatments steroid medication, and sulfasalazine, and finally employing surgery as the last option. [5) it primarily affects adults in their middle years and is less frequent in children. The most afflicted age range is between 30 and 40 years old, with reports of equal occurrence in men and women. [6-8] It has been observed that ulcer healing can be improved by up to 75% when biofeedback treatments (BFT) are used to target bowel training. Techniques like spending time on the toilet, synchronising the muscles of the pelvic floor and abdominal ones for successful pulling continued application of V alsalva manoeuvres, and so forth [9].

Methodology

This cross sectional single center study was carried out from January 2024 to June 2024 at Gastroenterology department, Bolan Medical Complex hospital, Quetta Balochistan after taking approval from ethical committee of the institute. Individuals who had LGIB for at least one week were included in this study and those of having severe respiratory illness, unstable angina, visceral perforation, shock, myocardial infarction in the recent past were excluded. A total of 257 patients were included whose mean age was 15 t0 70 years. Applying the World Health Organization's sample size calculator, the number of participants was determined to be 116. Nonetheless, we enrolled 257 in order to enhance the study's outcomes. Pre-made socio-demographic proforma was completed; a physical examination and history were taken. International criteria were followed in order to prepare the patients for the colonoscopy. Buscopan (20 mg) was injected intramuscularly after all other potential contraindications were ruled out in order to prevent colon spasms. A video colonoscope (Japan, Tokyo), was used for all colorectal operations. There was use of both ordinary and magnified pictures. Using chromoendoscopy, all lesions detected during the colonoscopy were enlarged and stained with 0.2% of the total indigo carmine. The lesions' diameters were recorded, and samples were obtained from the lesion's margins and centre and sent for histopathology. SPSS version 24 was used to analyze all of the data that had been collected. All variables were subjected to the post-stratification chi-square test, with a p-value of less than 0.05 being deemed statistically significant.

Results

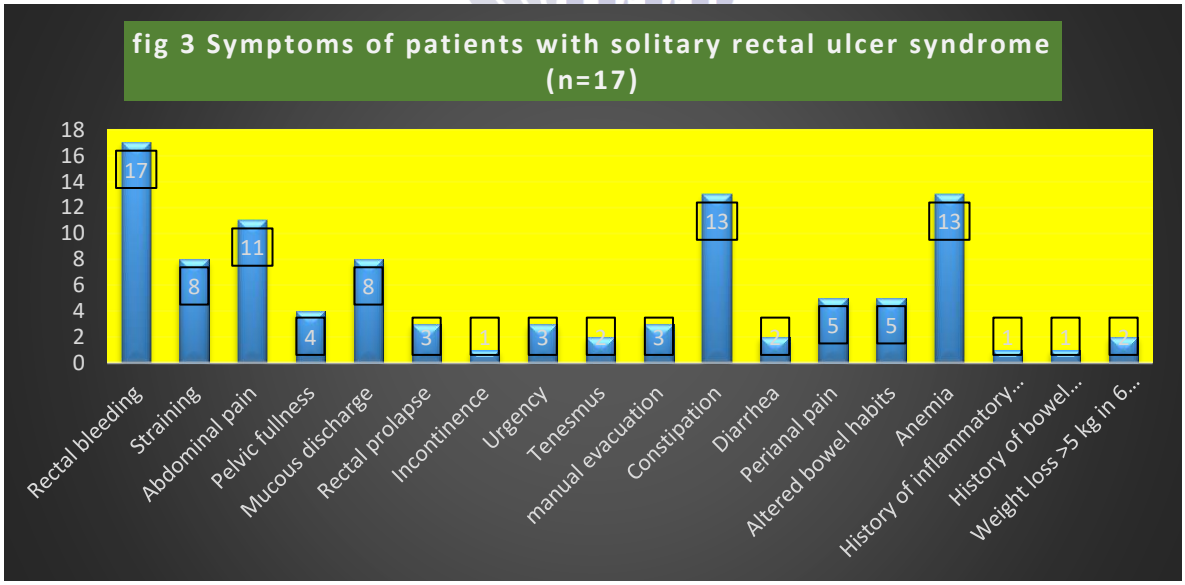
A total of 257 patients participated in this study in which 149 were males while 108. Out of these 6.6% (n=17) had rectal ulcers in which 64.7% (n= 11) were male and 35.2% (n= 6) were females and 39.8 ± 12.9 years was the mean age of the sample size The symptoms lasted between one and twenty-three weeks, with an average of 11.5 ± 4.3 weeks. With a general

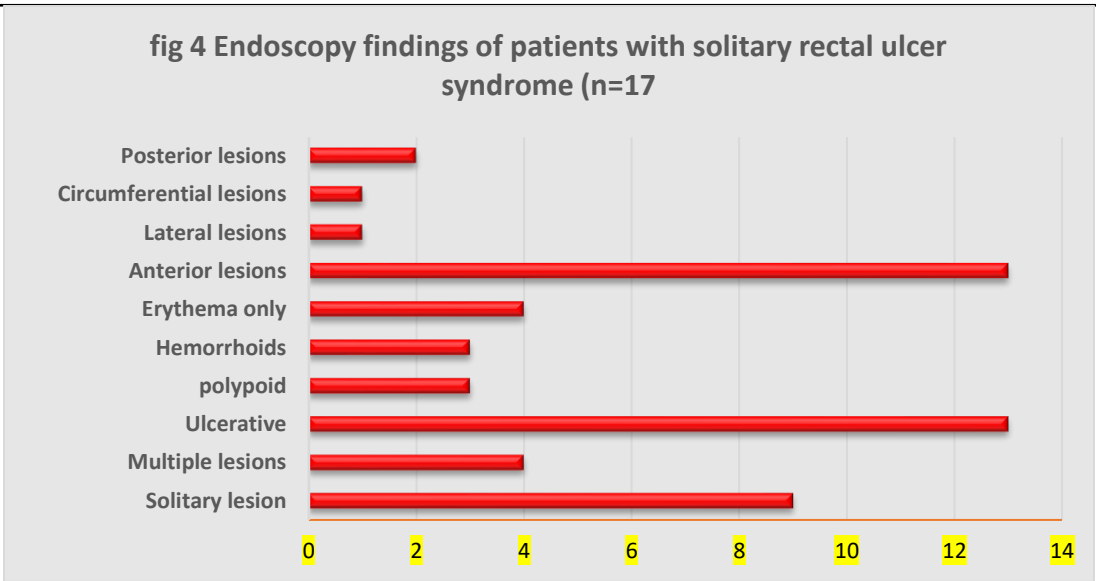
average BMI of 25.5, the mean BMI for men was 26.4 (95% confidence interval [CI] 19.6-32.7) and for females it was 24.7 (95% CI 18.9-29.5). Rectal ulcers varied in size from 0.6-5.5 cm, with a mean measurement of 4.2 cm. There were 5 (38%) mild cases with a mean haemoglobin level of 8.8 mg/dl within an array of 4.3-15.6 mg/dl. 2 (11%) were critically anaemic, 6 (46%) severely anemic, and 11% anemic up to moderately. With a mean proximity of 8.8 cm, the lesion's distance from the intestinal canal ranged from 5 to 14 cm. All of the research subjects' comprehensive sociodemographic information is included in **Table 1.**. The age group of 30 to 40 years old had the greatest impact ($p < 0.001$). The majority of those afflicted were males (64.7%, n = 11) ($p < 0.148$). The majority of SRUS patients had symptoms for a duration of eight weeks or more ($P < 0.040$). A thorough stratification of the research patients' age, length of the signs, and gender is given in **Table 2**.The most frequent presentations were: 17 (100% haemorrhage via rectum), 13 (76.4%) constipation, 8 (47%), straining, 8 (47%), mucous expulsion, 11 (64%), stomach discomfort, 2 (11%), and diarrhoea (2 (11.7%). Constipation accounted for Thirteen (76%), rectal prolapse contributed to 3 (17%), haemorrhoids 3 (17%), and electronic colonic manipulation 3 (17%) of the commonly related conditions. A detailed list of symptoms may be found in **fig 3.** P-values below 0.05 were regarded as significant. The most frequent historical presentations were: 17 (100% hemorrhage per rectum), 13 (76.4%) constipation, 8 (47%), straining, 8 (47%), mucous discharge, 11 (64%), stomach discomfort, 2 (11%), and diarrhea (2 (11.7%). Constipation accounted for 13 (76%), prolapse of the rectal 3 (17%), hemorrhoids (3 (17%), along with digital rectal manipulation Three (17%) of the commonly related conditions. A detailed list of symptoms may be found in **fig 3**. P-values below 0.05 were regarded as significant. Histological characteristics included surface crypt deformation in 4 (23%), fibromuscular destruction in 17 (100%), and ulceration in 9 (52%), infiltrated inflammation in 10 (58.8%), diamond-shaped crypt hyperplasia in 2 (11.7%), and mucosal gland distortion in 3 (17.6%). **Fig 5** provides additional information. P-values for 0.05 or less were regarded as crucial. Every patient received medical treatment along with conservative measures including food, lifestyle, and biofeedback therapy. They will all be monitored for a period of six months to gauge their progress. Patients who are not responding well to conventional treatment or who have issues will be given consideration for interventional treatments.

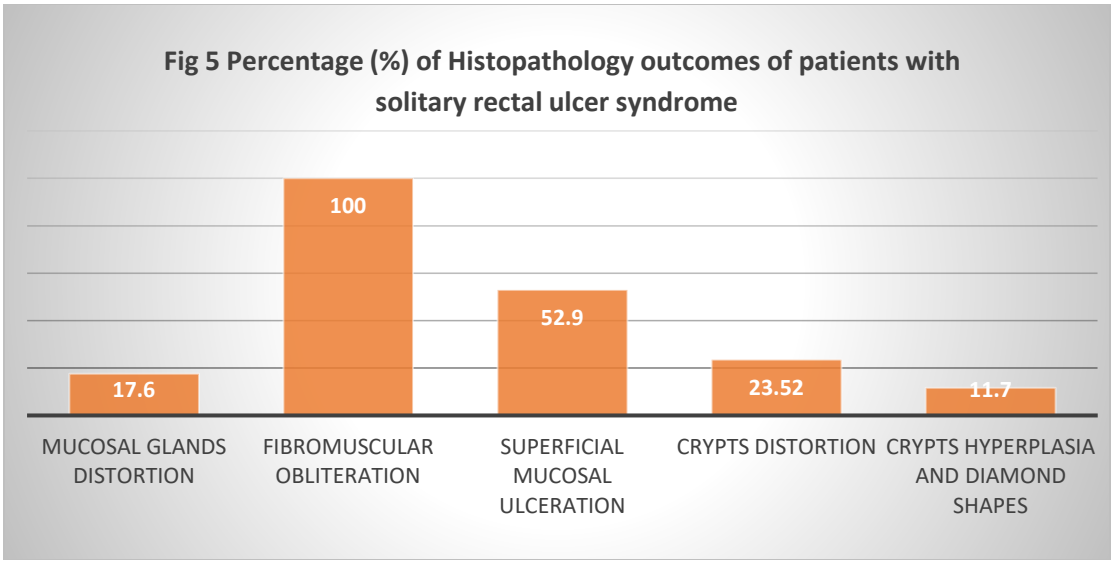
Table no 1 Demographic Description of the participants (n=257)		
Age in years	N	Percentage (%)
15-30	45	17.5
30-40	56	21.78
40-50	51	19.8
50-70	105	40.8
Total	257	100
Sex		
Male	149	58
Female	108	42
Total	257	100
Symptoms period in weeks		
1-4	60	23.3
4-8	81	31.5
8-12 and above	116	45.1
Total	257	100
Solitary rectal ulcer		
Yes	17	7

No	240	93
Total	100	100

Table no 2 Solitary rectal ulcer syndrome						
Age in years	Yes n=17 Frequency	Percentage	No n= 240 Frequency	Percentage	Total	P value
15-30	3	17.5	42	17	45	<0.001
30-40	8	47	48	20	56	
40-50	4	23.5	47	19	51	
50-70	2	11.8	103	42	105	
Total	17	100	240	100	257	
Sex						
Male	11	64.7	138	57.5	149	0.14
Female	6	35.2	102	42.5	108	
Total	17	100	240	100	257	
Weeks						
1-4	2	11.	58	24.1	60	0.040
4-8	4	23.5	77	32.0	81	
8-12 or above	11	64.7	105	43.7	116	
Total	17	100	240	100	257	







Discussion

Each patient got conservative measures pertaining to diet, way of life, and biofeedback therapy in addition to medical care. For a duration of six months, individuals will all be observed for the purpose to assess their development. Interventional therapy will be considered for patients who are having problems or fail to respond well to standard care (10). According to reports, overexertion of the anal sphincter contributes significantly to the pathophysiology of vein obstruction [11, 12].

According to a research by Womack et al., individuals with SRUS had mean intrarectal pressure of 74 mmHg compared to 44 mmHg in controls, and their mean contraction of the anal sphincters was 24% greater ($p < 0.02$).(13]. Additionally, we believe that the term "solitary rectal ulcer syndrome" is inadequate to describe the variety of ways the condition manifests itself (polypoidal, nodular in shape, numerous wounds, hyperplastic polyps, red lesions, carcinomas, etc.), and that a more appropriate nomenclature must be taken into consideration in order to include all potential variations under one diagnosis [14].

The second and third decades of life are predominant, according to an investigation by Zhu and colleagues [15], and our research indicates that this age group is especially impacted. On the other hand, our analysis revealed a higher percentage of men than women,

which contrasted sharply with the women's majority indicated by Zhu and colleagues. Research by Abusharifah and associates [16, 17]. Our recommendations are to start with more conservative methods such as using oral 5-amino-salicylic acids, stool training methods regardless of biofeedback, large quantities laxatives, enemas, reducing straining during defecation with good bowel habits, and endoscopic steroid an injection. The measures listed above should be employed, particularly in those without a concomitant rectal prolapse, and localized excisions should only be taken into consideration in cases when discomfort are unbearable [18]. Major resections, with or without rectopexy, should only be considered for large, isolated rectal ulcers. Interior prolapse of the rectum is best treated by veneural rectopexy, with favorable outcomes, improves symptoms in as many as 70% of patients, and heals ulcers in as many as ninety percent of cases [19].

When compared to conventional treatments alone, new therapies such as argon plasma coagulation (APC) have been demonstrated for certain studies to be 70% more effective in treating bleeding ulcers [20].

Conclusions

In our study, the frequency of single rectal ulcer syndrome reached 6.6%, which is a low occurrence and the benign defecation condition was frequently accompanied by lower gastrointestinal hemorrhage, bloating, straining, and abdominal discomfort. It requires a methodical strategy that includes biofeedback, conservative treatment, medical care, and, as a last option, surgery.

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