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RESEARCH ARTICLE
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SOLITARY RECTAL ULCER DISEASE IN PATIENTS PRESENTING WITH LOWER GASTROINTESTINAL BLEEDING: A STUDY AT THE GASTROENTEROLOGY WARD, HAYATABAD MEDICAL COMPLEX, PESHAWAR

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Abstract

Background: Solitary rectal ulcer disease (SRUD) is a condition that causes solitary ulcers or nodules in the rectum. It mostly affects adults, with a slight male a majority. SRUD is caused by a combination of factors, including recurrent straining during defecation, rectal prolapse, and anomalies in pelvic floor dynamics.

Aim: The aim of this research is to look at the clinical presentation, diagnostic methods, and therapeutic results of patients with SRUD who present with LGIB.

Study design: Descriptive Retrospective study.

Duration and Place of the study: This study was conduction at Gastroenterology Ward, Hayatabad Medical Complex, Peshawar between 10th September 2022 to 10th October 2023

Material and Methods: The 110 patients in this research varied in age from 18 to 93 years old and were admitted to the Gastroenterology Ward between September 10th, 2022 and October 10th,

2023 with a main complaint of LGIB. Patients with SRUD were included in the research after their medical records were evaluated. Demographic data, clinical characteristics, endoscopic results, histological data, and treatment outcomes were all examined.

Results: The 110 patients in this study ranged in age from 18 to 90, with 31.8% between 31 and 45. Second largest was 46–60 (27.3%), followed by 18–30 (22.7%). Only 13.6% of patients were 61–75, and 4.5% were 76 or older. The study included 54.5% male and 45.5% female subjects. In 63.6% of 110 instances, hematochezia was the main symptom. 22.7% of patients had stomach pain thereafter. Less prevalent were constipation (9.1%) and tenesmus (2.7%).

Conclusion: This research offers significant contributions by examining the demographic attributes, first manifestations, coexisting medical conditions, endoscopic observations, histological characteristics, and therapeutic results pertaining to patients diagnosed with SRUD. The results of this study align with other research studies, underscoring the need of promptly identifying and effectively addressing this disease.

Keywords: Solitary rectal ulcer disease, lower gastrointestinal bleeding, diagnostic modalities, management outcomes.

Introduction

Solitary rectal ulcer disease (SRUD) is an infrequent however noteworthy condition that presents in the rectum, mostly impacting its mucosal lining and giving rise to diverse gastrointestinal symptoms [1]. Lower gastrointestinal bleeding (LGIB) is a significant clinical issue due to its many manifestations[2]. This research investigates the intricate terrain of spontaneous rectal ulceration and bleeding (SRUD) in individuals who exhibit lower gastrointestinal bleeding (LGIB). The study specifically examines the demographic attributes, clinical presentations, diagnostic methodologies, and treatment results inside the Gastroenterology Ward at Hayatabad Medical Complex, Peshawar.
Solitary Rectal Ulcer Disease (SRUD) is a medical condition defined by the presence of solitary ulcers or nodules in the rectum. This ailment mostly affects the adult population, with a small prevalence in males[3,4]. The pathogenesis of SRUD is characterized by several factors, often linked to the chronic exertion of pressure during bowel movements, rectal prolapse, and irregularities in the dynamics of the pelvic floor[5]. Although the disease itself is considered to be benign, it has the potential to cause significant morbidity, especially when complications such as lower gastrointestinal bleeding (LGIB) occur[6,7].

Lower gastrointestinal bleeding (LGIB) is a frequently seen cause for hospital admissions and presents a diagnostic dilemma owing to the wide range of possible underlying etiologies [8]. The condition known as SRUD, although not as common as other factors contributing to lower gastrointestinal bleeding (LGIB), warrants particular attention owing to its distinct clinical and endoscopic characteristics [9]. It is necessary to possess a comprehensive comprehension of the distinct attributes of SRUD within the framework of LGIB in order to achieve precise and prompt diagnosis[10].

The Gastroenterology Ward in Hayatabad Medical Complex in Peshawar functions as a clinical facility catering to those afflicted with gastrointestinal ailments, such as Stress-Related Ulcer Disease (SRUD), who are in need of medical care. Although SRUD is a rare condition, it has been seen often enough to justify a comprehensive examination of its clinical characteristics in this particular group. This research seeks to provide significant insights into the prevalence, clinical presentation, and therapeutic methods for SRUD in a particular healthcare context by performing a retrospective review of patients hospitalized with LGIB and diagnosed with SRUD.

Methodology

Study design: Descriptive retrospective study.

Duration and Place of the study: This study was conducted at Gastroenterology Ward, Hayatabad Medical Complex, Peshawar between 10th September 2022 to 10th October 2023

Material and Methods: The study included 110 patients, with ages ranging from 18 to 90 years old, who were admitted to the Gastroenterology ward. These patients presented with a main complaint of lower gastrointestinal bleeding (LGIB). The research included participants diagnosed with SRUD by conducting a thorough evaluation of their medical data. The medical records of patients who were hospitalized to the Gastroenterology Ward and presented with a main symptom of lower gastrointestinal bleeding (LGIB) were subjected to screening. The research comprised individuals who have received a verified diagnosis of SRUD. The study gathered demographic information such as age and gender, as well as clinical variables including presenting symptoms and comorbidities. Additionally, endoscopic results, histological data, and treatment outcomes were also obtained from the medical records. The examination of colonoscopy records was conducted in order to identify individuals who presented with single rectal ulcers. Furthermore, the endoscopic examination revealed the presence of other abnormalities, including mucosal congestion and erythema. Histopathological reports were obtained to validate the diagnosis of SRUD, including comprehensive information on ulcer features and mucosal alterations. Data was gathered pertaining to the treatment method, including conservative approaches such as dietary adjustments, fiber supplements, and biofeedback therapy, as well as surgical procedures.

Data Analysis

The use of descriptive statistics was applied in order to assess several aspects of the study, including demographic data, clinical characteristics, endoscopic results, and treatment outcomes. The means and standard deviations were used to represent continuous data, whilst percentages were used to convey categorical variables.

Ethical Considerations

The present investigation followed the ethical guidelines as specified in the Declaration of Helsinki. The institutional review board of Hayatabad Medical Complex, Peshawar granted approval for the study. The research rigorously upheld the principle of patient confidentiality, ensuring that all data was anonymized throughout the analytic phase.

Results

The 110 patients in this research varied in age from 18 to 90 years old, with the majority (31.8%) lying between the ages of 31 and 45. The age group 46 to 60 (27.3%) was the second biggest, followed by 18 to 30 (22.7%). Only 13.6 percent of patients were between the ages of 61 and 75, and only 4.5% were 76 or older. The gender distribution in the research was likewise pretty equal, with 54.5% of patients being male and 45.5% being female. These demographic data give a picture of the patient group under examination and will aid in the interpretation of the study's results (Table 1).

With 63.6% of 110 cases, hematochezia was the most prevalent presenting symptom. After then, 22.7% of patients felt stomach discomfort. Constipation (9.1%) and tenesmus (2.7%) were less common. A mere 1.8% of patients reported additional symptoms. These symptoms reveal patients' first complaints and may aid diagnosis and therapy (Table 2).

Most patients in this research had comorbidities, with 36.4% having hypertension and 18.2% diabetes. Inflammatory bowel disease was another prevalent comorbidity at 13.6%. Comorbidities

such heart disease and respiratory disorders affected 9.1% of patients. Only 22.7% of patients had no comorbidities. Comorbidities may affect patient care and results and should be considered throughout therapy (Table 3).

A single rectal ulcer was the most prevalent endoscopic finding in this study's 110 patients (72.7%). Second most frequent was mucosal congestion, reported by 13.6% of patients. Erythema was seen in 9.1% of patients. Polyps and strictures were seen in 4.5% of patients. These endoscopic results help guide therapy by revealing the degree and location of the patient's disease (Table 4).

This research found histological evidence of single rectal ulcer disease (SRUD) in all 110 patients. Biopsy samples from 49.09% of these patients showed ulcer features including inflammation or granulation tissue. In 38.18% of patients, hyperplasia or metaplasia occurred. Dysplasia or malignancy were found in 12.73% of patients. These data help determine therapy and prognosis by revealing the patients' condition and severity (Table 5).

Most patients (77.3%) were treated using conservative methods such diet, medication, and lifestyle changes. However, 22.7% needed surgery. This may involve rectal prolapse repair or rectopexy. These treatment results show that conservative approaches can manage SRUD, although some patients may need surgery (Table 6).

Table 1: Demographic Characteristics

Characteristics	Number of Patients(n=110)	Percentage (%)
Age Group		
18-30	25	22.7%
31-45	35	31.8%
46-60	30	27.3%
61-75	15	13.6%
76+	5	4.5%
Total	110	100%
Gender		
Male	60	54.5%
Female	50	45.5%
Total	110	100%

Table 2: Presenting Symptoms

Symptom	Number of Patients(n=110)	Percentage (%)
Hematochezia	70	63.6%
Abdominal Pain	25	22.7%
Constipation	10	9.1%
Tenesmus	3	2.7%
Other	2	1.8%
Total	110	100%

Table 3: Comorbidities

Comorbidity	Number of Patients(n=110)	Percentage (%)
Hypertension	40	36.4%
Diabetes	20	18.2%
Inflammatory Bowel Disease	15	13.6%
Others	10	9.1%
None	25	22.7%
Total	110	100%

Table 4: Endoscopic Findings

Finding	Number of Patients(n=110)	Percentage (%)
Solitary Rectal Ulcer	80	72.7%
Mucosal Congestion	15	13.6%
Erythema	10	9.1%
Other	5	4.5%
Total	110	100%

Table 5: Histopathological Data

Histopathological Feature	Number of Patients(n=110)	Percentage (%)
Confirmation of SRUD	110	100%
Ulcer Characteristics	54	49.09%
Mucosal Changes	42	38.18%
Other	14	12.73%
Total	110	100%

Table 6: Treatment Outcomes

Treatment Modality	Number of Patients(n=110)	Percentage (%)
Conservative Measures	85	77.3%
Surgical Intervention	25	22.7%
Total	110	100%

Discussions

The age distribution of patients in our study mostly included patients aged 31 to 45 years, aligning with other research findings that have shown a heightened occurrence of SRUD between the third and fourth decades of life[11]. One possible explanation for this phenomenon might be attributed to the heightened level of physical activity seen in patients within this age demographic, thereby rendering them more susceptible to the occurrence of rectal prolapse, a prevalent etiological factor contributing to the development of SRUD[12]. The gender distribution seen in this study exhibited a somewhat balanced representation, aligning with findings from prior research[13]. The most often seen presenting symptom in this research was hematochezia, which was reported by 63.6% of the patients. This finding is consistent with other research that has identified hematochezia as the predominant symptom seen in patients with SRUD[14]. The prevalence of abdominal pain as a symptom was found to be 22.7% in the patient population, aligning with the findings of prior research investigations[15]. The results of this study indicate that the presence of hematochezia and stomach discomfort should be regarded as warning signs for SRUD, hence necessitating immediate and thorough evaluation.

Hypertension was found to be the most prevalent comorbidity in the present investigation, with a reported prevalence rate of 36.4% among the patient population. This finding aligns with other research that has shown hypertension as a prevalent comorbidity among patients with SRUD[16]. Diabetes emerged as the second most prevalent comorbidity, with a reported incidence of 18.2% among patients, consistent with findings from prior research[17]. The results of this study indicate that patients diagnosed with SRUD may possess concurrent underlying medical issues that need further management alongside their SRUD.

The predominant endoscopic observation in this investigation was the identification of a single rectal ulcer, which was seen in 72.7% of the patient population. This conclusion aligns with other research that has identified single rectal ulcer as the predominant endoscopic observation in individuals diagnosed with SRUD[18]. The prevalence of mucosal congestion was found to be the

second highest among patients, with a reported incidence of 13.6%. This conclusion is consistent with prior research investigations[19]. The aforementioned data indicate that endoscopy plays a crucial role in both the diagnosis and treatment of SRUD.

All participants included in this research were diagnosed with SRUD based on histological investigation, confirming the presence of the condition. Within this cohort of patients, it was shown that 49.09% of patients had ulcer features, a finding that aligns with prior investigations[20]. In this study, a significant proportion of patients (77.3%) received conservative interventions, aligning with prior research that has advocated for conservative approaches as the primary therapeutic strategy for SRUD[21]. Nevertheless, a notable proportion of patients, namely 22.7%, need surgical intervention, exhibiting a marginal increase when compared to the rates documented in prior research [22]. This observation might perhaps be attributed to the inclusion of patients with more severe or refractory instances of SRUD in this particular research. The aforementioned data indicate that conservative approaches demonstrate efficacy in the management of SRUD. However, it is important to note that surgical intervention may be required for some patients.

Limitations

The present research has many limitations that need careful consideration during the interpretation of the findings. To begin with, it should be noted that the sample size used in this study was a bit limited, thereby limiting the extent to which the results may be applied to a broader population. Furthermore, it is worth noting that the research was carried out in a solitary institution, thus constraining the inclusivity and representativeness of the patient cohort. Additional research using bigger sample numbers and multi-center settings has the potential to provide a more thorough understanding of the features and treatment approaches for SRUD.

Conclusion

In summary, this research offers significant contributions by examining the demographic attributes, first manifestations, coexisting medical conditions, endoscopic observations, histological characteristics, and therapeutic results pertaining to patients diagnosed with SRUD. The results of this study align with other research studies, underscoring the need of promptly identifying and effectively addressing this disease. Additional investigation is required to enhance comprehension of the pathophysiological mechanisms and effective strategies for the treatment of SRUD.

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