CASE REPORT

Acute Hemorrhagic Rectal Ulcer Syndrome: An Uncommon Cause of Exsanguinating Hematochezia

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ABSTRACT

Acute hemorrhagic rectal ulcer syndrome (AHRUS) is a seldom-seen source of substantial, painless rectal bleeding, typically found in elderly individuals who frequently have multiple concurrent health conditions. The precise underlying causes of this condition remain elusive, as do the most effective treatment approaches. This report presents a case involving an elderly male who experienced profuse rectal bleeding, was diagnosed with AHRUS, and successfully managed through endoscopic intervention. This case report underscores the challenges in diagnosing AHRUS and highlights the importance of considering this syndrome in elderly patients with painless, massive rectal bleeding after excluding other potential causes.

Keywords: Acute hemorrhagic rectal ulcer syndrome, hematochezia, rectal bleeding, rectal ulcer

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INTRODUCTION

Acute hemorrhagic rectal ulcer syndrome (AHRUS) is an uncommon clinical entity, characterized by ulcers(s) in the rectum, close to the dentate line. These lesions are reported more frequently in elderly individuals burdened with multiple coexisting health conditions. The precise mechanisms driving their formation remain elusive, resulting in severe, exsanguinating, and life-threatening rectal bleeding. The ulcer(s) are typically located near the dentate line in the rectum.[1-3] We here report a case of AHRUS managed with a combination of medical resuscitation and endoscopic intervention.

CASE REPORT

A 72-year-old male patient presented with a history of haematochezia of one day duration. His medical history included systemic arterial hypertension, diabetes mellitus, and a previous ischemic stroke. His prescription medications included losartan, insulin, atorvastatin, multivitamins, and aspirin. He had no history of gastrointestinal bleeding, chronic constipation, or altered bowel habits. At presentation, he was actively bleeding per rectum, pale, hypotension,and tachycardia.The patient received immediate resuscitation with intravenous fluids, followed by blood transfusion and other supportive measures. Laboratory tests revealed anemia (hemoglobin level of 5.4 g/dl) and leukocytosis (total count of 14,300 cells/cmm with 80% polymorphs), while platelet count, prothrombin time, and activated partial thromboplastin time fell within normal ranges. Biochemical analysis showed hyperkalemia (serum potassium level of 5.8 mEq/dl), renal impairment (serum creatinine level of 2.1 mg/

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dl), and mild elevations in transaminase levels (alanine aminotransferase at 76 U/L and aspartate aminotransferase at 63 U/L).

Following initial stabilization, the patient was taken upfor an urgent flexible sigmoidoscopy without bowel preparation. The examination revealed blood-stained contents in the rectum and a sizable ulcer measuring approximately 5 cm in diameter in the distal rectum, immediately proximal to the dentate line. An overlying clot was also observed (Figure 1). Adrenaline injections were administered in multiple quadrants of the rectal mucosa surrounding the ulcer. Subsequently, the clot was gently dislodged, revealing a visible vessel (Figure 1) managed with thermocoagulation. Supportive measures were continued, and antiplatelets were withheld. The following day, he was administered oral bowel preparation and re-evaluated with upper and lower gastrointestinal endoscopies. Colonoscopy revealed an otherwise normalmucosa, without colonic diverticula or blood in the lumen. Multiple mucosal biopsies were taken from the ulcer margins. During the biopsy, it was noted that the rectal lesion exhibited a soft consistency, which contrasts with the typical firm and gritty feel commonly associated with solitary rectal ulcer syndrome. An upper gastrointestinal endoscopy was performed and found to be unremarkable. Abdominal imaging, including ultrasound and computed tomography, yielded normal results except for evidence of fatty liver, without signs of cirrhosis or portal hypertension. Histopathological analysis of the biopsied tissue revealed epithelial denudation, mucosal neutrophilic inflammatory infiltrates, and microvascular thrombi. There were no features to suggest a neoplasm or solitary rectal ulcer syndrome. No inclusion bodies were identified, and tissue polymerase chain reactions for cytomegalovirus and herpes simplex viruses returned negative results.The presentation of massive, painless rectal bleeding in a patient with multiple comorbidities, a distal rectal ulcer, and characteristic histological findings led to the diagnosis of AHRUS.

DISCUSSION

The earliest indications of AHRUS trace back to 1974 when Delancy and Flitch documented acute and potentially life-threatening rectal hemorrhages stemming from isolated ulcers in the rectum[1]. The nomenclature "acute hemorrhagic rectal ulcer" was initially proposed by Soeno et al. in 1981[2]. It has been observed in individuals of

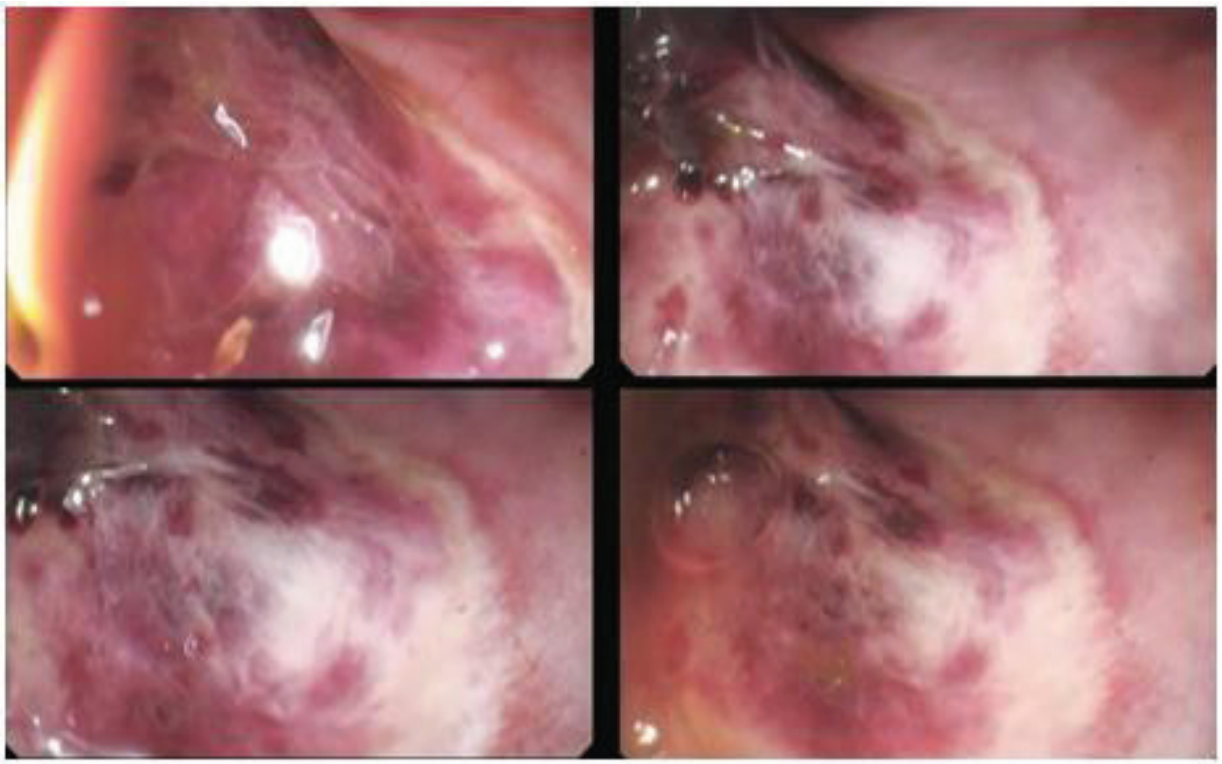

Figure 1: Rectal ulcer with an overlying blood clot and ulcer with the visible vessel after partly dislodging the clot.

both genders, with an average age of presentation at approximately 71.2 years[3].

The etiopathogenesis of AHRUS remains elusive. One postulated mechanism suggests a stress-related circulatory dysfunction mediated by vasoactive peptides. To date, infectious agents have no confirmed involvement in the causation of this syndrome[1]. A characteristic presentation often observed is the occurrence of massive rectal bleeding, particularly in elderly and critically ill patients. Diagnosis necessitates endoscopic examination, revealing single or multiple rectal ulcers, which may take various forms, including rounded, geographical, or circumferential ulcers, often near the dentate line[1-5]. Histological evaluation typically discloses superficial necrosis, acute inflammatory cell infiltration, and indications of recent hemorrhage, predominantly confined to the mucosal layer[2-4]. Although no definitive guidelines exist for treating this condition, local therapeutic approaches are usually effective in achieving hemostasis in most cases. Treatment options include local injection, thermocoagulation, transanal suture ligation, and, infrequently, angioembolization or surgical intervention[1-7].

Differential diagnoses for rectal ulcers encompass infectious ulcers, ischemic ulcers, solitary rectal ulcers, stercoral ulcers, traumatic ulcers, and iatrogenic ulcers caused by factors such as radiation or non-steroidal analgesics[1]. Our patient had no history of radiation exposure, non-steroidal analgesic use, or local trauma. He had no history of chronic constipation or altered bowel habits, which predispose to stercoral and solitary rectal ulcers. As mentioned before, the feel during the endoscopic biopsy procedure was not suggestive of solitary rectal ulcer syndrome. Furthermore, the histological characteristics associated with solitary rectal ulcer syndrome, inflammatory bowel disease, and infectious ulcers were not present. Bowel ischemia typically manifests with abdominal pain, which is notably absent in our case. Additionally, colonic ischemia typically involves the splenic flexure and sigmoid colon rather than the rectum[6,7]. He did not have any ulcers in the rest of the gastrointestinal tract, nor had any other demonstrable source of bleed. The clinical, endoscopic, and histological features, along with the exclusion of other potential diagnoses, collectively supported the diagnosis of AHRUS in our patient.

CONCLUSION

Acute hemorrhagic rectal ulcer syndrome is an uncommon cause of massive hematochezia. It is often a diagnosis of exclusion; a timely sigmoidoscopy or colonoscopy helps in diagnosis and management. Including AHRUS in the list of potential differential diagnoses is crucial when assessing elderly patients experiencing severe and life-threatening hematochezia.

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Author's contribution: Both the authors were involved in patient selection, collecting data, literature review, manuscript writing, editing and final submission.

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