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GIANT SOLITARY RECTAL ULCER: COMPLICATIONS AND ROLE OF RADIOLOGICAL INTERVENTION

General Surgery

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ABSTRACT

Solitary Rectal Ulcer Syndrome (SRUS) is a chronic and benign condition of rectum with an estimated incidence of one per 100000 people per year. Symptoms range from perianal pain, constipation, incomplete evacuation to severe bleeding per rectum and related complications. **Giant SRUS is further rare with average size measuring >4 cm in diameter.** There is absolute paucity of data for role of radiological intervention in SRUS and complications associated with giant SRUS. Here we discuss a case of giant SRUS which was refractory to standard modalities of treatment, was associated with complications like severe bleeding per rectum (PR), perianal abscess and fistulae formation. He also required radiological as well as surgical intervention in form of trans-arterial embolization and Incision and drainage of perianal abscess / fistulotomy, respectively

KEYWORDS

Solitary Rectal ulcer Syndrome, Trans-arterial embolization, bleeding per rectum

INTRODUCTION:

Taking into consideration social dilemma with bleeding PR& intermittent hospital admissions, in case with SRUS, timelyintervention withtrans-arterial embolization is the key to avoid the related complications.

Case Report:

62 years male presented with bright red bleeding per rectum (PR) with history of straining and incomplete evacuation. He used to self-digitate to initiate bowel movement since 15 years. He had myocardial infarction 2 months back followed by angioplasty and was on anticoagulants. Rectal examination revealed decreased resting as well as squeeze pressure of the anal tone. There was evidence of hematochezia with solitary grade 2 internal hemorrhoid and irregular ulcer with soft edges, 4 cm from anal verge. Anorectal manometry, 4 years back, revealed decreased rectal sensation. Magnetic Resonant Defecography (MRD), 3 years back, showed no gross structural abnormality but decreased rectal sensation and inability to expel the barium paste on straining. Flexible sigmoidoscopy done, during this admission, showed 4.5 cm ulcer, over the right lateral rectal wall covered with blood clots but no active bleeding. He was managed with antibiotics, topical sucralfate and steroid enemas and anticoagulants were withheld. MRI done on this admission showed profound nodular thickening with a focal ulcer in right lateral wall of lower rectum. It also showed submucosal collection along with diffuse inflammation, extending laterally into the mesorectum and caudally into the right lateral wall of anal canal with a blind ending trans-sphincteric tract in the right ischioanal fossa. Within 48 hours, he had repeat episode of large bout of bleeding PR. **Repeat sigmoidoscopy showed oozing from ulcer edges for which Argon Plasma coagulation (APC) was done**. About 24 hours after APC, he had a re-bleed. CT Angiography was then performed which showed active extravasation near the ulcer bed with extensive collateralization (Figure 1). Digital Subtraction Angiography (DSA) run showed late arterial blush on right side in the rectal and ischio-rectal area. Angio-embolization of the feeder vessel was done using polyvinyl alcohol (PVA) particles (500-700 mic) after cannulating the inferior mesenteric artery (Figure 2). Patient was observed for 72 hours, there was no PR bleed. He later underwent surgical intervention for drainage of the perianal abscess along with fistulotomy. After 48 hours of surgery, he was restarted on anticoagulants and was discharged.

DISCUSSION:

SRUS is an uncommon rectal disorder with incidence of 1 in 100,000 individuals per year [2]. Men and women appear to be equally affected, with slight female preponderance, contradictory to our case. It normally presents with constipation, straining during defecation, a sense of incomplete evacuation and sometimes, rectal bleeding and perianal pain.

Predisposing factors include excessive straining at stools, pelvic floor dysynergia, rectal prolapse and occasionally, self-induced trauma like self-digitation as in our case. On internal examination, if ulcers are low, smoothened edges can be felt and they generally are, too vascular and bleed to touch. Diagnosis is based on detailed history, clinical features, sigmoidoscopy and histological examination [2]. Other investigations like defecating proctography and anorectal functional studies including anorectal manometry provide additional information for complex and refractory cases [1].

Sigmoidoscopy is done to rule out other causes of bleeding like polyps, mass lesions or colitis. Sigmoidoscopic findings of SRUS can vary from pre-ulcer hyperemic changes of rectal mucosa to well-formed ulcers covered by slough, with average ulcer size ~ 1 – 1.5 cm. The largest ulcer size reported in literature is 4.5 cm [1], similar to our case. Biopsy of solitary rectal ulcer is mandatory to rule out other causes. Diffuse collagen deposition in lamina propria and abnormal smooth muscle fiber extensions are sensitive markers for differentiating SRUS from other conditions [2, 3].

Defecating proctography is done to rule out internal intussusception or rectal prolapse. It also demonstrates non-relaxing puborectalis muscle and incomplete or delayed rectal emptying. Anorectal manometry provides information about anorectal inhibitory reflex, pressure profiles, defecation dynamics, rectal compliance and sensory thresholds. In our case, MRD and anorectal manometry, done few years back, revealed decreased rectal sensation and inability to expel the barium paste on straining. Recent studies showed the usefulness of anorectal ultrasound in assessing internal anal sphincter thickness, which is increased in patients with SRUS [3, 4].

Patient education and behavioral modification are the first steps in treatment of SRUS. In particular, asymptomatic patients, may not require any treatment other than behavioral modifications like avoidance of straining and self-digitation, regulation of toilet habits; discuss any psychosocial factors and encourage high-fiber diet [3]. In symptomatic patients, combination of medical and behavioral therapy, in form of biofeedback, bulk laxatives and high fibre diet is recommended. If symptoms persist, the patient, a trial of sucralfate enemas for 6 weeks is given [5]. Medical therapy with topical enemas of salicylates, corticosteroids and mesalamine have been reported to be effective [2]. However, in our case, patient was refractory to all the

medical measures. Surgical treatment is recommended for patients who present with complications, those with associated pathology and who are resistant to conservative management.

Argon Plasma Coagulation (APC) can be used to control bleeding from ulcers edges, as was done in our case. For bleeding rectal ulcers, there is paucity of literature regarding role of angiographic embolization and only few case reports have been published. It involves embolization of the feeder vessel, most commonly superior rectal artery, success rate of up to 70 % [7]. After failure of medical as well as endoscopic therapy, angiographic embolization can be used as a modality to control bleeding, as in our case [5]. Surgical intervention like suture ligation of bleeding vessel is recommended in refractory cases and occasionally may need anterior resection of the rectum [2]. Other modalities of surgery which may be required for associated pathologies include incision and drainage of perianal abscess, fistula surgery, resection rectopexy or perineal proctectomy for associated prolapse.

CONCLUSION:

Giant SRUS are more likely to be refractory to medical management with high probability of presenting with complications. Males are more likely to develop complicated SRUS and likely to be refractory to medical therapy. Trans-arterial embolization may be considered as a modality of treatment for medically refractory cases of SRUS.

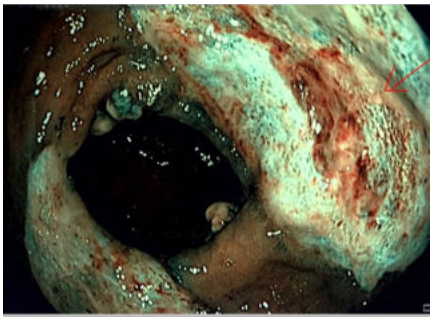
Legends

Fig 1 - 1a: MIP image showing abnormal vascularity in the perirectal region

1b: Coronal reformat showing contrast extravasation to the right of rectum

Fig 2 – 2a: Micro catheter injection showing abnormal vasculature and blush to right of the rectum

2b: Post embolization DSA run shows absence of the abnormal blush and vasculature.



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