Anorectal Dieulafoy’s lesion

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ABSTRACT

Dieulafoy’s lesion is a rare but well-recognized cause of life-threatening bleeding from the gastrointestinal tract, especially upper gastrointestinal tract, resulting due to rupture of an exposed submucous artery. With the advances in endoscopy and awareness of Dieulafoy’s lesion as the cause of massive bleeding in the anorectal region, it has gained the reputation of an unusual but important cause of lower gastrointestinal hemorrhage also. We describe a 45-year-old female with a Dieulafoy’s lesion at the anorectal junction who presented with massive lower gastrointestinal bleed. Endoscopic management was tried but failed and the patient was managed surgically. A brief review of the relevant literature is also presented.

Key words: Anorectal, dieulafoy’s lesion, hematochezia

INTRODUCTION

Dieulafoy’s lesion is a rare cause of life-threatening bleeding from the gastrointestinal tract resulting due to rupture of an exposed submucous artery. This lesion was named after George Dieulafoy,[1] who described three cases with massive upper gastrointestinal bleed from small gastric ulcerations in 1898. He termed them ‘exulceratio simplex’. Dieulafoy’s lesions were initially reported in proximal stomach[2] which is the most common site; they have also been described in the esophagus, duodenum, small bowel, colon and rarely in the rectum[3] and anal canal.[4] Anorectal Dieulafoy’s lesion has increasingly been recognized as an important cause of rectal bleed. Most of these lesions can be managed endoscopically, but they may need surgical intervention, which provides definite treatment as described in this case report. We describe a 45-year-old female, who presented with massive lower gastrointestinal bleed. On colonoscopy, there was an actively bleeding Dieulafoy’s lesion near the anorectal junction. Endoscopic management was tried initially but hemostasis could not be achieved and the patient was managed surgically.

CASE REPORT

A 45-year-old female presented with a history of hematochezia for the last 24h. The bleeding started after passing hard stools and was small in amount initially but gradually increased to passage of big clots and fresh blood. The patient was actively bleeding at the time of admission. There was no significant past history except constipation and history of hypertension for six years on regular treatment. History of any rectal trauma or ingestion of nonsteroidal anti-inflammatory drugs was absent. On proctoscopy the rectum was full of clots. Her hemoglobin was 8.1 g/dl at the time of admission. Rest of the investigations including renal function tests (blood urea-28 mg%, serum creatinine-0.8 mg%), Coagulogram (INR - 1.13) were normal. She was urgently taken up for colonoscopy. There was an actively bleeding vessel just above the anorectal junction approximately 5 cm from the anal verge. Ablation of the vessel by adrenaline injection was tried but poor visibility due to clots and active bleeding made the procedure unsuccessful. Anal packing was done and the procedure abandoned.

After 12h the pack was removed and there was no bleeding. Repeat colonoscopy after bowel preparation revealed a pulsatile ~2 mm vessel at 5 cm from the anal verge on the right lateral wall. Surrounding mucosa was
normal. Rest of the colon up to the caecum was unremarkable. As hemoclip were not available, banding was tried but failed and patient started bleeding again. Patient was taken up for surgical management. In the lithotomy position under epidural anesthesia, the vessel was oversewn with 3-0 vicryl. The bites taken were submucosa deep, starting 1.5 cm proximal to the bleeding vessel. Hemostasis was achieved and patient was discharged the next day. On follow-up at two months, the patient was asymptomatic and proctoscopy revealed no further lesion.

**DISCUSSION**

Dieulafoy’s lesion is a well-recognized cause of gastrointestinal bleed mainly involving the upper gastrointestinal tract. But with the advances in endoscopy and awareness of Dieulafoy’s lesion as the cause of massive bleeding in the anorectal region, it has gained the reputation of an unusual but important cause of lower gastrointestinal hemorrhage.

The endoscopic criteria for diagnosis of Dieulafoy’s lesion are a mucosal defect 2-5 mm (averaging < 3 mm), occurring in combination with one of the following:[4]
1. A protruding small blood vessel (1-2 mm)
2. Active arterial bleeding
3. Fresh adherent clot with narrow attachment point
4. Inactivity with evidence of recent bleeding.

The cause of Dieulafoy’s lesion is unknown. But it has been suggested that the lesion is congenital, caused due to failure of natural tapering of the muscular arteries[5] as shown in angiography also.[6] As the rectum has direct blood supply via the superior, middle and inferior rectal arteries analogous to the proximal stomach, an anatomical basis also exists for the development of rectal Dieulafoy’s lesion.[7] Once a large muscular arteriole reaches the submucosa, various local factors have been described responsible for its rupture.[4] These include local ischemia caused by pulsatile arterial compression, age-related mucosal atrophy, ingestion of alcohol or nonsteroidal anti-inflammatory drugs and stercoral ulceration (the most probable local cause in the present case also).

Gastric Dieulafoy’s lesion can be diagnosed with the help of repeated upper gastrointestinal endoscopy in 82% of cases with less than 50% of cases having identifiable lesion at the time of initial endoscopy.[7] This is due to small lesion and intermittent bleeding. Colonic Dieulafoy’s lesions are also difficult to be diagnosed with the help of colonoscopy due to presence of clots or feces thus making angiography a more helpful tool for diagnosis.[3] Anorectal Dieulafoy’s lesions are relatively easier to diagnose by anoscopy or sigmoidoscopy. Sometimes, in active bleeding, mesenteric angiography may miss the bleeding arising from the lower rectum as its blood supply does not arise from the inferior mesenteric artery. Thus internal iliac arterial visualization is necessary to detect bleeding from the inferior rectal artery.[8]

The treatment options also vary depending upon the site of Dieulafoy’s lesion. While gastric lesions can be managed by sclerosing agents or epinephrine followed by heater probe, the small bowel and colonic lesions generally require surgical resection. Anorectal Dieulafoy’s lesions can be managed by either endoscopy using epinephrine followed by heater probe,[3] sclerosing agents, laser photocoagulation and band ligation[9] or surgical treatment in the form of oversewing,[8] suture ligation or wedge excision in the form of hemorrhoidectomy.[4]

The present case was diagnosed with the help of colonoscopy and the description of the lesion fits in with the diagnosis of Dieulafoy’s lesion. Endoscopic management was tried initially in the form of epinephrine injection and later, banding but bleeding could not be controlled. Finally the lesion was oversewn transanally, with suturing starting 1.5 cm proximal to the lesion, keeping in mind the possibility that the arteriole may travel a long distance submucosally.[4]

In conclusion, Dieulafoy’s lesion is a rare but potentially lethal cause of lower gastrointestinal bleed as it may easily be missed on endoscopy and mesenteric angiography, especially if it is present in the lower rectum. Awareness of this entity is a must when dealing with a lower gastrointestinal bleed case and proper bowel preparation is necessary for good visualization of the lesion. In anorectal lesions anal packing may transiently halt bleeding thus buying valuable time for bowel preparation and resuscitation. Endoscopic treatment should be tried initially but if failed then surgical oversewing or suture ligation provides definitive treatment[8] as also found in the present case.

**REFERENCES**


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