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Case Report

Delayed Lower GI Post Polypectomy Bleeding: Nightmare of A Surgeon- A Case Report

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Abstract:

Introduction: Snare polypectomy is the gold standard treatment of colorectal polyp. Although colonoscopic polypectomy is generally safe, immediate or delayed post polypectomy bleeding may occur. The patient may present 1-30 days after successful polypectomy in delayed bleeding.

Presentation of case: We present a case of delayed post polypectomy bleeding. The patient presented four days after snare polypectomy. The patient was hemodynamically unstable, and there was ongoing per rectal bleeding. The patient was initially resuscitated and colonoscopic measures were done to achieve hemostasis.

Discussion: Delayed bleeding after polypectomy occurs in about 0.3-1.2% of all colonic polypectomies. Sloughing off of the scar and increasing the zone of necrosis are the primary pathogenesis of delayed bleeding. Polyp, patient and procedure-related factors are identified as responsible for delayed bleeding. Most patients are managed by only observation, but a few patients require repeat colonoscopy.

Conclusion: Delayed post polypectomy bleeding is rare but lethal. Initial resuscitation and assessment of the patient is the key to managing such type of bleeding.

Keywords: Delayed post polypectomy bleeding; Snare polypectomy; Case report

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Introduction:

A colorectal polyp is a small clump of cells that forms on the lining of the colon or rectum. Most colon polyps are harmless. But over time, some colon polyps can develop into colon cancer. Colonoscopic polypectomy is the gold standard treatment of colorectal polyps. Although colonoscopic polypectomy is generally safe; immediate or delayed post polypectomy bleeding may occur. Delayed bleeding can occur 1–30 days

after the successful polypectomy [1]. Delayed bleeding after polypectomy occurs in about 0.3-1.2% of all colonic polypectomies [2].

Numerous patient, polyp and procedure-related factors contribute to the risk of delayed post polypectomy bleeding.

It is generally assumed that bleeding is more likely to occur after the eschar, which forms over the excision site, sloughs off. Although most such patients require only observation, others may require more intense monitoring in the critical care unit, transfusions, and endoscopic, angiographic, or surgical intervention [3]. We present a case of delayed post polypectomy bleeding where the patient presented with severe per rectal bleeding in a hemodynamically unstable condition four days after polypectomy. This patient was diagnosed and managed in Chittagong Medical College Hospital, Chattogram, a tertiary hospital in Bangladesh. This case report is compiled and adopted according to the Surgery Case Report (SCARE) guidelines [4].

Case report:

A 23-year-old male presented in the surgery outpatient department of Chittagong Medical College Hospital with the complaint of painless per rectal bleeding for the last six months. He noticed stools mixed with blood six months ago. The blood was sometimes bright red, and other times it was blackish. The episodes were occasional. His bowel habit was regular. There were no associated symptoms like nausea, vomiting, fever, weight loss, or abdominal pain. The patient was nondiabetic and normotensive. There was no drug history like heparin, warfarin, or NSAIDs. He was nonsmoker and nonalcoholic. There was no family history of colorectal carcinoma.

On examination, all his vital signs were within the standard limit. Per abdominal examinations revealed normal and digital rectal examination and proctoscopy were insignificant. He was advised for colonoscopy. Colonoscopy revealed two sessile polyps at the upper rectum (0.3 cm and 0.5 cm in diameter), one pedunculated polyp at the sigmoid colon (1 cm in diameter), and one sessile polyp at the caecum (1 cm in diameter) (Pic 1). All baseline investigations were done afterward and were found normal. He was planned for colonoscopic polypectomy at the next available date. All polyps were excised at the same time. Hot snare was used for sigmoid colon and caecal polyps and hot biopsy forceps were used for rectal polyps (Pic 2).

Thorough checking was done after the polypectomy for immediate bleeding, and hemostasis was found satisfactory (Pic 3). All the excised polyps were sent for histopathology. The patient was sent home one hour after the procedure with the advice of a low residue diet for 2-3 days and a standard antibiotic regimen. The histopathology report was available after three days, and all of the excised polyps were inflammatory polyps.

On the subsequent follow-up after three days, his bowel movement was regular, and there was no per rectal bleeding. On day four, the patient informed that he had 1 episode of per rectal bleeding mixed with stool in the morning. The blood was blackish. Proper counseling was done, and Tranexamic Acid was advised. The frequency of bleeding increased within the next 6 hours and gradually the color of the blood turned bright red. The patient was advised for immediate hospitalization. On admission, his skin was cold clammy; his pulse rate was 100 beats/min; his blood pressure was 90/60 mm of Hg and his urine output was decreased. Immediate IV cannulation was done, and crystalloid fluid was started. 4 units of RBC concentrate were transfused, and the patient was prepared for colonoscopic evaluation the following morning. During resuscitation, four episodes of fresh per rectal bleeding without stool occurred. All the baseline investigations, including bleeding and coagulation profiles were done. His hemoglobin level comes down from 12 to 4 g/dl. All other investigations were normal.

On the following day, during colonoscopy, while the scope entered the colon, there was fresh blood and blood clots throughout the whole colon. The scope entered slowly up to the caecum by repeated irrigation and suction. The bleeding point was identified at the site of resected polyp at the caecum (Pic 4). The rest of the polyp bases were found normal. After thorough irrigation exact bleeding point was identified and it was found that delayed bleeding occurred due to sloughing

out of the scar. Submucosal epinephrine (1:10000) solution was injected at the stalk. Bleeding decreased but did not stop. After that, hemoclips were applied to the stalk. Total three hemoclips were applied at different sites of the stalk (Pic 5). Then complete hemostasis was achieved. The site was observed for more than 10 minutes. While withdrawing the scope, other polyp resection sites were rechecked. The total procedure took 90

minutes. Initial polypectomy was done by the primary author (performing such procedures for eight years), and therapeutic colonoscopic hemostasis was done with the help of 2 senior gastroenterologists. The

patient was observed for another 24 hours and no more episode of per rectal bleeding occurred. Consultation with the hematologist was done before discharge of the patient.

Discussion:

Endoscopic polypectomy is the gold standard treatment of colorectal polyp. Widely used different tools are available for polypectomy. Decision-making about performing polypectomy is often made during colonoscopy when a polyp is detected. The method chosen for polypectomy is often related to the appearance and size of the polyp [5]. Typically, cold snare or hot biopsy forceps are used for smaller polyps (less than 5 mm), and hot snare is used for intermediate polyps (1 cm or larger) [6]. Endoscopic mucosal resection or endoscopic submucosal dissection is used for larger polyps (2 cm or larger) [7].

Post-polypectomy bleeding is an infrequent complication and may be immediate or delayed. The European Society of Gastrointestinal Endoscopy (ESGE) defines delayed post polypectomy bleeding that occurs after the procedure and up to 30 days post polypectomy, which results in emergency attendance, hospitalization, or need for re-intervention [8]. Various mechanisms have been proposed in the pathogenesis of such types of bleeding. Polypectomy creates a mucosal gap with submucosal tissue and vessel injury. Over time, this gap fills up by mucosal re-epithelization [9]. Sometimes, ulceration of the temporary wound scar occurs due to premature sloughing of the scar. It eventually exposes an underlying blood vessel before re-epithelization is complete. Bleeding may be spontaneous or traumatic related to the passage of stools across the polypectomy site [10]. Another theory is that extension of thermal injury and zone of necrosis may extend to previously noninjured tissue, including blood vessels [11]. Several risk factors have been proposed related to delayed post polypectomy bleeding. Some are patient-related factors like hypertension, a history of cardiovascular disease and antithrombotic drugs, aspirin, or clopidogrel usage. Polyp-related factors like polyp >1 cm size, polyp in the right colon, especially in the caecum, and sessile polyp have also been identified as risk factors [12]. In our case, the patient was a young male without any co-morbidity or drug history. The only risk factor was that the polyp was located in the right colon.

The majority of the patients with post polypectomy bleeding require only observation. Others may require more intense monitoring in the critical care unit, transfusions, and endoscopic, angiographic, or surgical intervention. The most crucial decision associated with post polypectomy bleeding is “To scope or not to scope?” Several studies suggest that a repeat colonoscopy to identify and treat the bleeding lesion is beneficial in about 22% of patients [13]. Patients with ongoing bleeding (bloody bowel movement occurring every 2 hours) should be prepared for and undergo colonoscopy, while patients who do not have persistent bleeding (few, small volume stools or no further bowel movements following their initial presentation) do not require endoscopic examination [14]. Colonoscopy is done with the placement of hemoclips or bipolar electrocautery, sometimes combined with submucosal epinephrine injection. Most of the patients with ongoing bleeding can be managed with endoscopic therapy, and further intervention, such as surgery or angiographic methods, is required in very few cases [15]. In our case, the patient was initially resuscitated, and hemostasis was achieved by combining submucosal epinephrine injection and hemoclips, per the standard guideline.

References:

1. Sonnenberg A. Management of delayed postpolypectomy bleeding: a decision analysis. Am J Gastroenterol. 2012;107(3):339-342.

2. Kim SY, Kim H-S, Park HJ. Adverse events related to colonoscopy: global trends and future challenges. World J Gastroenterol. 2019;25 (2):190–204.

3. Whitlow CB. Endoscopic treatment for lower gastrointestinal bleeding. Clin Colon Rectal Surg 2010;23:31–6.

4. Agha RA, Fowler AJ, Saeta A, Barai I, Rajmohan S, Orgill DP, for the SCARE Group. The SCARE Statement: Consensus-based surgical case report guidelines. Int. J. Surg. 2016;34:180-186.

5. Fyock CJ, Draganov PV. Colonoscopic polypectomy and associated techniques. World J Gastroenterol 2010; 16(29): 3630-3637.

6. Moss A, Bourke MJ, Tran K, Godfrey C, McKay G, Chandra AP, Sharma S. Lesion isolation by circumferential submucosal incision prior to endoscopic mucosal resection (CSI-EMR) substantially improves en bloc resection rates for 40-mm colonic lesions. Endoscopy 2010; 42: 400-404.

7. Kaltenbach T, Anderson JC, Burke CA, Dominitz JA, Gupta S, Lieberman D et al. Endoscopic Removal of Colorectal Lesions: Recommendations by the US Multi-Society Task Force on Colorectal Cancer; Am J Gastroenterol; 2020;115(3):435-464.

8. Ferlitsch M, Moss A, Hassan C, et al. Colorectal polypectomy and endoscopic mucosal resection (EMR): European Society of Gastrointestinal Endoscopy (ESGE) Clinical guideline. Endoscopy. 2017;49(3):270–297.

9. Elliott TR, Tsiamoulos ZP, Thomas-Gibson S, et al. Factors associated with delayed bleeding after resection of large nonpedunculated colorectal polyps. Endoscopy. 2018;50(8): 790–799.

10. Ket SN, Mangira D, Ng A, et al. Complications of cold versus hot snare polypectomy of 10–20 mm polyps: a retrospective cohort study. JGH Open. 2020;4(2):172–177.

11. Truscello D, Torres J, Shah M, Weston J, Blair B. 3134 rare complication of delayed bleeding after polypectomy. ACG. 2019;114:S1684.

12. Bendall O, James J, Pawlak KM, et al. Delayed Bleeding After Endoscopic Resection of Colorectal Polyps: Identifying High-Risk Patients. Clin Exp Gastroenterol. 2021; 14:477-492.

13. Sorbi D, Norton I, Conio M et al. Postpolypectomy lower GI bleeding: descriptive analysis. GI Endoscopy. 2000; 51(6):690-696.

14. Church JM. Experience in the endoscopic management of large colonic polyps. ANZ J Surg 2003; 73:988.

15. Saltzman JR. Management and prevention of bleeding after colonoscopy with polypectomy. Uptodate 2020. Last updated June 22 2020. Available from: https://www.uptodate.com/contents/management-and-prevention-of-bleeding-after-colonoscopy-with-polypectomy/prin.

Picture legends:

Pic 1: Polyp at the caecum (attached)

Pic 2: Hot snare polypectomy of the caecal polyp (attached)

Pic 3: Stump after snare polypectomy (attached)

Pic 4: Bleeding point identified during repeat colonoscopy (attached)

Pic 5: Bleeding stopped after application of hemoclips (attached)