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Case Report

Endoscopic Polypectomy in a Patient with Hemophilia A and Associated Von Willebrand Factor Deficiency: A Case Report

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Abstract

Endoscopic polypectomy is the first-line treatment for colorectal polyps. However, this procedure carries an increased risk of bleeding in patients with hemostatic disorders, particularly in the presence of a large pedunculated polyp. We report the case of a 52-year-old man with hemophilia A and associated von Willebrand factor deficiency, admitted for rectal bleeding evolving over the previous year. Laboratory investigations revealed severe iron-deficiency anemia and a reduced factor VIII level. Colonoscopy showed a large pedunculated sigmoid polyp located 50 cm from the anal verge, with a 15 mm stalk and a 30 mm head. A multidisciplinary approach involving gastroenterologists and hematologists allowed endoscopic polypectomy to be performed using a hot snare after hemostatic preparation with coagulation factor concentrates and tranexamic acid, together with prophylactic placement of an end loop. No periprocedural or postprocedural bleeding complications were observed. Histopathological examination revealed a tubulovillous adenoma with low-grade dysplasia, with complete resection and negative margins. This case highlights that endoscopic polypectomy can be safely performed in a hemophilic patient, provided that careful preparation, appropriate hemostatic prophylaxis, and preventive endoscopic techniques are used.

Keywords: Polypectomy, hemophilia, von Willebrand factor, gastrointestinal bleeding, end loop.

INTRODUCTION

Endoscopic polypectomy is the standard treatment for colonic polyps and plays a major role in the prevention of colorectal cancer. Nevertheless, periprocedural and delayed post-polypectomy bleeding remain among its main complications. This risk is increased in patients with hemostatic disorders, particularly hemophilia or von Willebrand disease, as well as in the presence of large pedunculated polyps.

In hemophilic patients, therapeutic endoscopic procedures require prior assessment of bleeding risk, close coordination with the hematology team, and implementation of appropriate preventive measures. Despite this, the available literature remains limited regarding the optimal duration of coagulation factor coverage and the safest technical approaches in this setting.

We report the case of a patient with hemophilia A and associated von Willebrand factor deficiency who successfully underwent endoscopic resection of a large sigmoid polyp.

CASE PRESENTATION

A 52-year-old man with hemophilia A and von Willebrand factor deficiency presented with rectal bleeding of approximately one year's duration, without any other associated gastrointestinal symptoms.

Proctologic examination revealed hemorrhoidal skin tags and an anal fissure at the 2 o'clock position. Digital rectal examination showed blood-stained stool on the glove.

Laboratory investigations demonstrated severe hypochromic microcytic iron-deficiency anemia, with a hemoglobin level of 5 g/dL, and a factor VIII level of 21.7%.

Total colonoscopy revealed a pedunculated sigmoid polyp located 50 cm from the anal verge, with a long stalk measuring approximately 15 mm in length and 8 mm in width, and a 30 mm head. The endoscopic appearance corresponded to a

Paris 0-Ip lesion, **Connect IIA**

Given the patient's bleeding disorder and the characteristics of the lesion, the decision to proceed with endoscopic polypectomy was made after multidisciplinary discussion with the hematology team.

Preprocedural management was based on tailored hemostatic prophylaxis. According to the adopted protocol, Wilate® was administered as an intravenous bolus before the procedure, followed by continuous infusion during the procedure and continued postoperatively for several days, in combination with oral tranexamic acid (Exacyl®). This regimen aimed to correct the hemostatic defect and reduce the risk of immediate and delayed bleeding.

From a technical standpoint, a prophylactic endoloop was first placed at the base of the stalk. Hot snare polypectomy was then performed above the ligature. No intraprocedural bleeding was observed. The postoperative course was uneventful, with no secondary bleeding.

Figure: Video Polypectomy in a Hémophilic patient

Histopathological examination of the resected specimen revealed a tubulovillous adenoma with low-grade dysplasia, without histological evidence of malignancy, and with clear resection margins.

DISCUSSION

Endoscopic polypectomy is the standard treatment for colorectal polyps and represents a key component of colorectal cancer prevention. However, the procedure is not without risk, and periprocedural or delayed bleeding remains its most common complication. In the general population, the bleeding rate after polypectomy is estimated to range from 0.3% to 6%, with an increased risk in cases of large pedunculated polyps, thick stalks, or proximal lesions [1].

In patients with hemophilia A, the bleeding risk associated with invasive procedures is significantly increased. This X-linked inherited coagulopathy is characterized by a quantitative or functional deficiency of factor VIII, resulting in impaired secondary hemostasis. The coexistence of von Willebrand factor deficiency may further increase the risk of bleeding, as von Willebrand factor plays a crucial role in platelet adhesion and in the stabilization of factor VIII in plasma [2].

In this context, therapeutic endoscopic procedures require careful planning and multidisciplinary management involving both gastroenterologists and hematologists. International recommendations advocate correction of factor VIII deficiency before any invasive procedure, generally aiming for factor levels above 50% to 80% for endoscopic interventions carrying a moderate to high bleeding risk [3]. Hemostatic coverage should also be maintained for several days after the procedure in order to prevent delayed bleeding.

The administration of combined factor VIII and von Willebrand factor concentrates, such as Wilate®, allows simultaneous correction of both hemostatic abnormalities. The addition of an antifibrinolytic agent such as tranexamic acid is also an effective adjunctive measure to stabilize clot formation and reduce the risk of secondary bleeding [4].

From a technical perspective, several endoscopic strategies have been proposed to reduce the risk of bleeding during resection of large pedunculated polyps. Among these, mechanical ligation of the stalk before transection is widely recommended. The endoloop enables strangulation of the stalk and significantly reduces blood flow before resection with a diathermic snare. This technique is particularly indicated for polyps with a head larger than 20 mm or when the stalk is wide, both situations being associated with a higher risk of bleeding [5].

In our case, the combination of appropriate hemostatic preparation and prophylactic endoscopic measures allowed polypectomy to be performed without immediate or delayed bleeding complications. This outcome highlights the importance of an individualized strategy in patients with congenital bleeding disorders.

The available literature on polypectomy in hemophilic patients remains limited and is mainly based on retrospective series and case reports. Nevertheless, several studies suggest that therapeutic endoscopic procedures can be performed with an acceptable complication rate when adequate hemostatic correction and prophylactic measures are used.

In the series reported by Tintillier *et al.,* involving colonoscopies performed in patients with hemophilia, the bleeding risk after polypectomy was markedly higher than that observed after simple biopsy, with a post-polypectomy bleeding rate of 31% (6/19), whereas no bleeding was observed after biopsy. The authors emphasized that bleeding complications occurred in patients with polyps larger than 7 mm, suggesting that lesion size is a major determinant of risk and that the duration of factor replacement should be tailored to the type of procedure performed [1, 4].

Conversely, more recent data appear more reassuring when the procedure is performed in an experienced center with standardized hemostatic prophylaxis. In the largest published series of patients with congenital bleeding disorders undergoing gastrointestinal endoscopy, Tomaszewski *et al.,* reported that the bleeding risk was not significantly higher than that observed in the general population when patients were adequately prepared from a hemostatic standpoint. These findings support the notion that bleeding risk is not solely related to hemophilia itself, but also depends on the type of endoscopic procedure, the size of the resected lesion, the technique used, and the quality of peri-procedural hemostatic correction. [2, 3].

In this setting, the recommendations of the Medical and Scientific Advisory Council (MASAC) of the National Bleeding Disorders Foundation (NBDF) consider polypectomy to be a high-risk endoscopic procedure and recommend, in patients with moderate or severe hemophilia, factor levels raised to 80%–100% before the procedure, in combination with antifibrinolytic therapy, with continuation of hemostatic coverage for several days depending on polyp size and resection complexity [1, 5]. Therefore, the safety of polypectomy in hemophilic patients appears to depend less on avoiding the procedure itself than on appropriate patient selection, optimal hemostatic preparation, and the use of prophylactic endoscopic measures whenever necessary.

Finally, careful postprocedural monitoring is essential in this population, as delayed bleeding may occur up to 7 to 10 days after resection.

CONCLUSION

Endoscopic polypectomy in a patient with hemophilia is feasible and can be performed safely when management is multidisciplinary, planned in advance, and tailored to the bleeding risk. The combination of correction of coagulation factor deficiency, antifibrinolytic therapy, and preventive endoscopic measures such as endoloop placement appears to effectively reduce the risk of periprocedural and postprocedural bleeding. This case supports an individualized approach coordinated between gastroenterologists and hematologists.

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