CASE REPORT

BLEEDING DUODENAL ULCER IN A PATIENT WITH HEMOPHILIA A

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Abstract

Hemophilia A is a hereditary bleeding disorder characterized by excessive musculocutaneous hemorrhage due to a congenital deficiency of factor VIII. While upper gastrointestinal bleeding in patients with hemophilia A has been reported globally, specific literature on this topic remains scarce, emphasizing the need for further research. Case presentation: A 38-year-old male presented at the Univesrity Clinic of Gastroenterhogepatology, reporting a recent episode of black stool three days prior to admission. His digital rectal examination was unremarkable, and levels of blood urea and nitrogen (BUN) were within normal ranges. Apart from Helicobacter pylori infection, the patient lacked significant risk factors for duodenal ulcers. An esophagogastroduodenoscopy (EGD) revealed a duodenal ulcer (classified as Forest Ib), and endoscopic hemostasis was performed using 9ml adrenaline solution. Coagulation factor VIII was administered prior to the procedure. Following the EGD, the patient was treated according to the duodenal ulcer protocol and hospitalized at the University Clinic. Conclusion: Recognizing risk factors, such as Helicobacter pylori infection and the use of nonsteroidal anti-inflammatory drugs, is crucial in managing duodenal bleeding ulcers in patients with Hemophilia A. Screening for Helicobacter pylori infection can significantly reduce the risk of ulcer-related bleeding episodes and enhance overall patient health. Further research and the development of clinical strategies are essential to optimize the management of duodenal ulcers in this patient population.

ПРИКАЗ НА СЛУЧАЈ

КРВАРЕЧКИ ДУОДЕНАЛЕН УЛКУС КАЈ ПАЦИЕНТ СО ХЕМОФИЛИЈА А

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Клучни зборови: дефицит на фактор VIII, гастроинтестинално крварење, хемофилија А

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Печатарски права: ©2024. Ивана Балоска, Фана Личоска-Јосифовиќ, Марјан Балоски, Сања Трајкова. Оваа статија е со отворен пристап дистрибуирана под условите на нелокализирана лиценца, која овозможува неограничена употреба, дистрибуција и репродукција на било кој медиум, доколку се цитираа оригиналниот(ите) автор(и) и изворот.

Конкурентски интереси: Авторот изјавува дека нема конкурентски интереси.

Извадок

Хемофилија А е наследно хеморагично заболување кое се презентира со прекумерни мускулно-кутани крварења настанати поради вроден дефицит на фактор VIII. На глобално ниво се застапени горнодигестивни крварења поради хемофилија А, но постои недостиг на стручна литература и опишани случаеви со што се нагласува потребата од понатамошни истражувања. Приказ на случај: 38- годишен маж се јавил на Универзитетската клиника за гастроентерохепатологија, со податок за епизода на црна столица три дена пред приемот. Дигиталниот ректален преглед беше незабележителен, а уреата и азот во крвта (BUN) беа со нормални вредности. Освен инфекција со Helicobacter pylori, пациентот немаше други значајни ризик фактори за појава на дуоденален улкус. Направена беше езофагогастродуоденоскопија (ЕГД) која откри дуоденален улкус (класифициран како Forest Ib), а ендоскопска хемостаза беше извршена со употреба на адреналински раствор (9мл). Пациентот прими коагулационен фактор VIII пред ендоскопската процедура. По извршената ЕГД, пациентот беше третиран според протоколот за дуоденален улкус и хоспитализиран на Универзитетската клиника. Заклучок: Препознавањето на ризик факторите како инфекција со Helicobacter pylori и конзумирањето на нестероидни антиинфламаторни лекови кај пациентите со хемофилија А се клучни за ефикасно справување со дуоделаните улкуси. Скринингот за инфекција со Helicobacter pylori може да помогне да се намали ризикот од епизоди на крварење поврзани со чир на дуоденум како и подобрување на целокупното здравје на пациентот. Потребни се понатамошни истражувања и клинички стратегии за развивање и усовршување на менаџментот на дуоделаните улкуси кај пациентите со хемофилија А.

Introduction

Hemophilia A is a hereditary bleeding disorder characterized by excessive musculocutaneous hemorrhage caused by a congenital deficiency of factor VIII[1].

Recurrent joint and soft tissue bleeds are prevalent in patients with hemophilia A, representing hallmark manifestations of the condition[2]. Among the potential sources of gastrointestinal bleeding in this population, duodenal ulcer stand out, necessitating careful consideration of both bleeding risk and therapeutic interventions[3]. Although upper gastrointestinal bleeding associated with Hemophilia A is recognized globally, there is a scarcity of literature specifically addressing duodenal bleeding ulcers in these patients, highlighting the necessity for further research and clinical insights to enhance patient care and outcomes[4].

In this context, we present a case report of 38-year-old male patient with hemophilia A, who experienced an episode of duodenal bleeding ulcer. We outline the multidisciplinary management approach used to address this clinical challenge.

Case presentation: A 38-year-old male patient presented at the University Clinic of Gastroenterohepatology, reporting a recent episode of black stool three days prior to admission.

The patient has hemophilia A and has not been prescribed any medications for chronic diseases. Additionally, he is a non-smoker and abstains from alcohol consumption.

During the examination, no symptoms besides the primary complaint were observed upon reviewing the patient's systems. On physical inspection, he appeared acutely unwell, with slightly pale skin and conjunctiva. There were no signs of scleral jaundice or enlargement of the liver or spleen. His digital rectal examination was unremarkable, and blood urea and nitrogen (BUN) levels were within normal ranges. Vital signs were within normal limits, with blood pressure measuring 115/75 mm Hg, pulse rate of 90 beats per minute, respiratory rate of 20 breaths per minute, and body temperature of 37.4 ℃. An electrocardiogram revealed sinus tachycardia.

Laboratory results showed a minimal increase in leukocyte count and normal hemoglobin levels of 14.2g/dL. The prothrombin time (PT) was recorded at 11.2 seconds, while activated partial thromboplastin time (aPTT) was 39.7 seconds, indicating prolonged aPTT values. The factor VIII antihemophilic globulin level was measured at 11.5%.

Diagnosis and Management

The patient had no significant risk factors for duodenal ulcers, except for a suspected Helicobacter pylori infection. Therefore, an Esophagogastroduodenoscopy (EGD) was preformed to evaluate the upper gastrointestinal tract.

Before the procedure, the patient received coagulation factor VIII, due to low levels of the factor. During the EGD, normal mucosa was observed in the esophagus, while the stomach exhibited hematin patches, suggesting prior bleeding or irritation. Further examination revealed a duodenal linear bleeding ulcer located on the bulb of the duodenum (classified

as Forrest Ib), necessitating immediate intervention (Fig.1.). Endoscopic hemostasis was achieved using a 9ml adrenaline solution to stop the bleeding and promote ulcer healing.

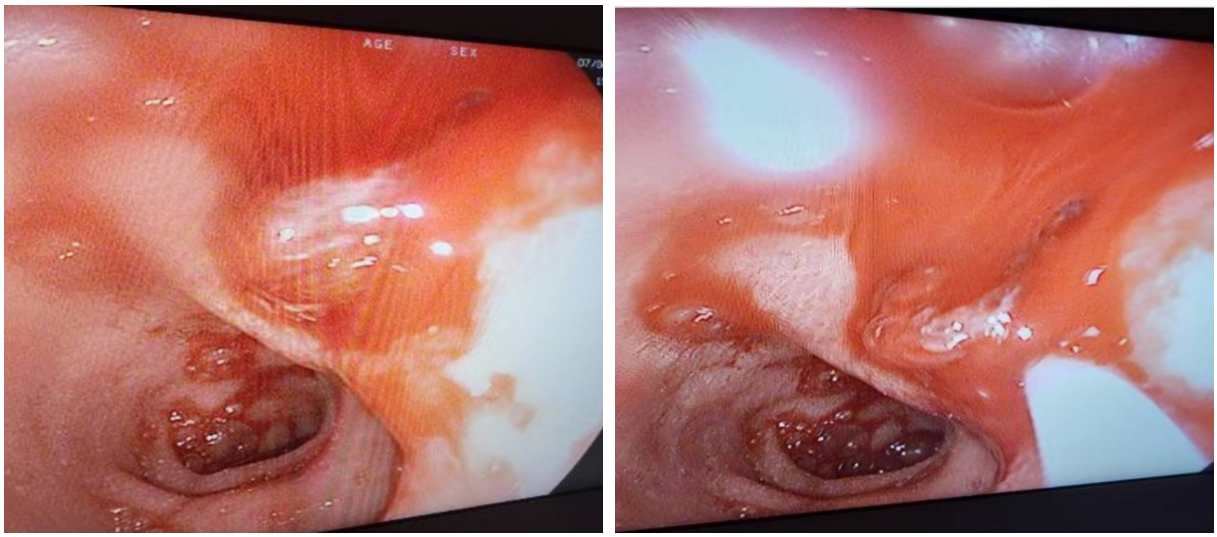


Figure 1. Endoscopic findings: Duodenal linear bleeding ulcer located on the bulb of the duodenum

Following the procedure, serological testing for Helicobacter pylori infection was conducted, with positive results confirming our suspicion.

During the hospitalization, the patient received parenteral nutrition for three days before transitioning gradually to oral intake. The patient began quadruple therapy for Helicobacter pylori infection, which included intravenous antibiotics (metronidazole, tetracycline and bismuth subsalicylate) and proton pump inhibitors (PPIs) for a duration of 14 days.

Throughout the entire treatment period, the patient received Factor VIII to manage his hemophilia A. Control EGD were performed during hospitalization to monitor ulcer progression and assess for recurrent bleeding episodes. The examinations revealed a notable reduction in ulcer size and signs of healing, indicating a positive response treatment and promising prognosis for the patient's gastrointestinal health.

After discharge, the patient continued attending regular follow-up appointments at the gastroenterohepatology clinic, including esophagogastroduodenoscopies. These follow-up examinations confirmed ulcer cicatrization and signs of healing, with no evidence of infection. The urease breath test for Helicobacter pylori infection, performed three months later, showed negative results. The patient was advised to continue using PPI inhibitors and to undergo follow up H2 antagonist therapy for continued care.

Discussion

In patients who have hemophilia A, the correlation between Helicobacter pylori infection and duodenal bleeding ulcers presents a complex and critical aspect of gastrointestinal management.

Hemophilia A, characterized by a deficiency in clotting factor VIII, significantly impairs the body's ability to form blood clots, rendering patients particularly vulnerable to the bleeding complications. When combined with the risk of duodenal ulcers induced by Helicobacter pylori, the clinical management becomes even more challenging.

Helicobacter pylori is gram-negative bacterium known for its role in the development of chronic gastritis and peptic ulcers, including duodenal ulcers. This bacterium colonizes the gastric mucosa, leading to persistent inflammation and increased acid secretion, which contributes to the formation of ulcers in the duodenum. The chronic inflammation induced by Helicobacter pylori weakens the mucosal barrier, making it more susceptible to damage from gastric acid and exacerbating ulcer formation[5].

In addition to Helicobacter pylori, the use of nonsteroidal anti-inflammatory drugs (NSAIDs) can further aggravate ulcer formation and bleeding risk by compromising the mucosal defenses of the gastrointestinal tract [6]. However, Helicobacter pylori remains a primary concern due to its direct role in the development and exacerbation of duodenal ulcers.

For patients with hemophilia A, the presence of Helicobacter pylori is particularly alarming due to the additional burden it places on their already compromised hemostatic system. The development of duodenal ulcer in these individuals can result in significant gastrointestinal bleeding, a serious complication exacerbated by their impaired clotting ability[7]. The bleeding risk is compounded by the fact that these patients may experience delayed or insufficient clot formation, making even minor gastrointestinal hemorrhages potentially life-threatening.

The interaction between Helicobacter pylori and duodenal ulcers in hemophilic patients underscores the importance of early diagnosis and intervention. Active screening for Helicobacter pylori infection should be conducted in patients with hemophilia A who present with gastrointestinal symptoms such as abdominal pain, black stools, or vomiting blood. Early detection and eradication of Helicobacter pylori are crucial in managing ulcer-related complications[8].

Treatment typically involves a combination of antibiotics and proton pump inhibitors (PPIs). Quadruple therapy, which includes metronidazole, tetracycline, bismuth, and PPIs is often employed to effectively eradicate Helicobacter pylori and reduce acid secretion, thereby promoting ulcer healing. This therapeutic approach not only addresses the underlying infection but also mitigates the factors contributing to ulcer formation and bleeding[9].

Moreover, managing bleeding risk in these patients involves careful control of their hemophilia A. Factor VIII replacement therapy is essential to ensure adequate hemostasis during and after ulcer treatment. Endoscopic interventions may be required to control active bleeding and asses the severity of ulcers, while ongoing monitoring is necessary to prevent recurrence and manage any potential complications[10].

Conclusion

Recognizing risk factors like Helicobacter pylori infection and the use of nonsteroidal anti-inflammatory drugs in patient with Hemophilia A is crucial for effectively managing duodenal bleeding ulcers. Screening for Helicobacter pylori infection can help reduce risk of the ulcer-related bleeding episodes and improve overall patient health. Further research and clinical strategies are needed to develop and refine optimal management of duodenal ulcers in patients with hemophilia A.

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