GAVIN PUBLISHERS

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Annals of Case Reports

Hare KM, et al. Ann Case Report 06: 571.

DOI: 10.29011/2574-7754.100571

Case Report

Spontaneous Vulvar Hematoma after Colonoscopy in a Patient with Von Willebrand Disease

Kristin M Hare[1], Ruchit N Shah[2], Alexis Svokos[1*]

[1*]Department of Obstetrics and Gynecology, Geisinger Medical Center, Danville, Pennsylvania, USA

[2]Department of Gastroenterology and Hepatology, Geisinger Medical Center, Danville, Pennsylvania, USA

[*]**Corresponding author:** Alexis Svokos, Geisinger Medical Center, Dept of Obstetrics and Gynecology, 100 N Academy Ave, Danville, Pennsylvania 17821, USA.

Citation: Hare KM, Shah RN, Svokos A (2020) Spontaneous Vulvar Hematoma after Colonoscopy in a Patient with Von Willebrand Disease. Ann Case Report 06: 571. DOI: 10.29011/2574-7754.100571

Received Date: 05 December, 2020; **Accepted Date:** 28 December, 2020; **Published Date:** 31 December, 2020

Abstract

Vulvar hematomas in non-obstetric patients are rare and typically develop after trauma to the area. Management options include conservative and surgical options and are dependent on size of the hematoma and patient symptoms. We present the case of a patient with von Willebrand disease who presented with a large vulvar hematoma two days after undergoing colonoscopy.

Presentation

The patient is a 68-year-old post-menopausal female with a prior medical history significant for hypertension, rheumatoid arthritis, irritable bowel syndrome, endometriosis, migraines without aura and von Willebrand disease. Her prior surgical history is significant for total abdominal hysterectomy and bilateral salpingo-oophorectomy secondary to endometriosis, and laparoscopic cholecystectomy. Patient presented for a follow up colonoscopy due to her history of tubular adenoma. Prior to her colonoscopy, her pre-operative hemoglobin was 14.9g/dL, and hematocrit 45.1%. Her pre-operative platelets were 282K/uL. She underwent colonoscopy, during which time a tubulovillous adenoma was resected from the hepatic flexure, as well as an adenomatous polyp was resected from the descending colon. (Edits/comments per GI). Patient was discharged home after the procedure in stable condition.

On post-procedure day #1, patient reported developing a small painful lump in the vaginal area. She was advised to monitor her symptoms and to apply heat. On post-procedure day #2, patient presented to the emergency department (ED) due to worsening pain and enlarging vaginal mass. She denies any fevers, nausea or vomiting at that time and was able to void spontaneously. Upon presentation to the ED, patient was hemodynamically stable, her hemoglobin was 13.3g/dL, and hematocrit 40.5%. On physical exam, she was noted to have a large, palpable left vulvar hematoma, tender to the touch. CT of abdomen and pelvis was obtained which revealed a large subcutaneous hematoma in the left vulvar region measuring 4.5x7.2cm (Figure 1,2). Due to the size of the hematoma and the extent of patient's symptoms, decision was made to proceed with surgical incision and drainage of left vulvar hematoma. Patient was treated pre-operatively with Desmopressin (0.3mcg/kg once, 30 minutes prior to procedure) due to her history of Von Willebrand disease. During surgical evacuation of hematoma, approximately 100 cc's of blood clots were evacuated, and good hemostasis was noted at the completion of procedure. The patient had an uncomplicated post-operative course. On post-operative day 1, patient experienced minimal vaginal bleeding, and there was no evidence of recurrent vulvar hematoma on physical exam. Her repeat hemoglobin was 11.7g/dL. She was able to void without difficulty and she had minimal pain. Patient was discharged home on post-operative day 2 in stable condition with minimal vulvar swelling and pain.

Figure 1: 44.8x72.0mm left vulvar hematoma.

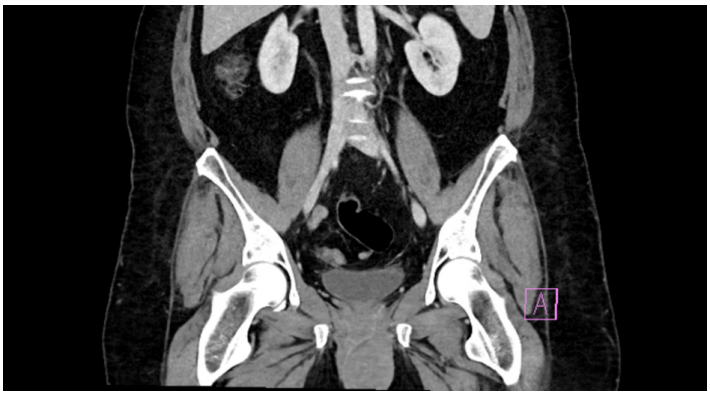

Figure 2: Left vulvar hematoma.

Discussion

Colorectal Cancer (CRC) is the second most common cancer and the third most common cause for cancer-related mortality in the U.S. Colonoscopy is the most common modality for CRC screening. Overall, adverse events related to colonoscopy are uncommon but include perforation, bleeding, post-polypectomy electrocoagulation syndrome, splenic injury, and submucosal or intramural hematomas. Prior to colonoscope insertion, direct injury to the surrounding tissue to due friction, slippage, or scope misdirection is extremely rare, however, can be seen in patients with difficult body habitus. Insertion of the colonoscope into the vaginal canal instead of the rectum could also cause tissue injury, especially if prompt withdrawal is not attempted. While this patient's colonoscopy procedure was performed without complication, it is possible that her history of von Willebrand disease placed her at increased risk for this adverse event.

Von Willebrand Disease (vWD) is the most inherited disorder of hemostasis, thought to affect 1% of the total population [1]. It results in a decreased production or function of von Willebrand factor (vWF), a glycoprotein released by endothelial cells and megakaryocytes that functions in platelet adherence to damaged endothelium and stabilization of clotting factor VIII. Three types have been described, with types 1 and 3 being partial and complete quantitative deficiencies in vWF, respectively. Type 2 is characterized by various qualitative defects in vWF. Type 1 is the most common subtype and clinically presents with superficial mucocutaneous bleeding. In premenopausal women, menorrhagia can be the first and only presenting sign, affecting 60-95% of women with vWD [2]. Types 2 and 3 vWD, however, can present with more life-threatening bleeding patterns, especially in cases leading to significant deficiencies in factor VIII. It can be difficult to predict bleeding patterns amongst the various subtypes of vWD, and this poses difficulty in providing clinical guidelines on pharmacologic management of these patients who desire to undergo elective surgery and procedures.

As previously mentioned, colonoscopy places a patient at risk of injury to surrounding structures. The vulva consists of highly vascularized tissue supplied by the internal pudendal artery, a branch of the anterior division of the internal iliac artery. In addition to supplying the external female genitalia, the internal pudendal artery further contains branches supplying the rectum and perineum. Intrapartum, damage to these vessels supplying the vulva and perineum can occur from trauma during delivery, resulting in postpartum vulvar hematoma. Non-obstetric vulvar hematomas are far less common account for up to 0.8% of all gynecologic hospitalizations [3]. These traditionally occur from direct physical trauma to the vulva or perineum and occur with physical assault, coitus, and straddle injuries. Spontaneous rupture of the internal pudendal artery has also been shown to occur in a patient presenting with vulvar hematoma [4].

Conservative versus surgical management of a vulvar hematoma remains controversial. Small vulvar hematomas in a hemodynamically stable patient are typically managed with analgesics and compression. For patients who demonstrate hemodynamic instability with a rapidly expanding hematoma, urologic, or neurologic symptoms, surgical management with blood clot evacuation and ligation of bleeding vessels is warranted [4]. Imaging modalities such as perineal ultrasound which can be performed at bedside and enhanced Computed Tomography (CT) can be helpful in determining size of the hematoma, with CT scan providing the additional benefit of identifying retroperitoneal involvement or bleeding vessels [5,6]. In cases where primary surgical management has failed or an actively bleeding vessel has been identified on enhanced CT, embolization to achieve hemostasis prior to evacuation of the hematoma has been noted to be successful [7].

In the case of our patient presenting with significant vulvar pain, an expanding vulvar hematoma and a decrease in hemoglobin, the decision was made to proceed with urgent surgical management for evacuation of the hematoma.

Conclusion

In women presenting with a non-obstetric vulvar hematoma, the most common cause is trauma to the underlying subcutaneous vulvar tissues which contain a rich blood supply. In the case of this patient, it is uncertain how these subcutaneous vessels were injured during the time of her colonoscopy procedure. While the patient is at higher risk for intraoperative blood loss due to her history of von Willebrand Disease, there have been no reports to our knowledge demonstrating vulvar hematoma after colonoscopy and it is important to take this into consideration as a possible adverse event.

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