

Management of a Post-Traumatic Vulvar Hematoma: A Case Report

M. Sekkat, M.B. Idrissi, N. Douzi, N. Mamouni, S. Errarhay, C. Bouchikhi, A. Banani.

Department of Obstetrics and Gynecology I, CHU Hassan II, Faculty of Medicine, Pharmacy, and Dentistry, Sidi Mohamed Ben Abdallah University, Fez, Morocco

Abstract: Vulvar hematomas are uncommon outside the obstetric setting, and large post-traumatic hematomas can pose significant clinical challenges. Rapid diagnosis and appropriate management are crucial to prevent complications. We report the case of a 32-year-old woman who sustained a large vulvar hematoma following a straddle-type fall onto a chair. On examination, she was hemodynamically stable, but local swelling and a laceration of the left labia majora were noted. Pelvic CT angiography revealed a 73.3 mL hyperdense hematoma without active contrast extravasation. The patient underwent prompt surgical evacuation of the hematoma. Postoperative recovery was uneventful, with complete restoration of vulvar anatomy and no long-term complications after 10 months of follow-up. Non-obstetric post-traumatic vulvar hematomas, although rare, can rapidly progress and require timely surgical intervention when large or symptomatic. Early recognition, imaging evaluation, and prompt management are key to achieving favorable outcomes and preventing functional or aesthetic sequelae.

1. INTRODUCTION:

Vulvar hematomas are a complication most commonly encountered in obstetrical practice, usually following the repair of an episiotomy or perineal tears occurring during childbirth. In contrast, non-obstetrical vulvar hematomas are rare [1–4]. They may result from blunt trauma caused by a straddle injury, a fall, traumatic sexual intercourse, impalement, or sexual assault [3,5–8]. While most of these hematomas are of small size and pose little threat to the patient, some may become large enough to induce hemodynamic instability, thereby requiring urgent management. In such cases, conservative management is often abandoned in favor of immediate surgical treatment, consisting of hematoma evacuation and hemostatic suturing [3]. We report the case of a 32-year-old woman who presented with a large vulvar hematoma following a straddle fall onto a chair. Through this case, we aim to share our experience regarding the management of this injury in our hospital setting.

2. CASE REPORT:

Mrs. M.A., a 32-year-old married woman and mother of two children, was admitted to our department for the management of a post-traumatic vulvar hematoma following a straddle-type injury caused by a fall onto a chair. On admission, the patient was conscious and hemodynamically and respiratory stable. Abdominal examination revealed a soft abdomen with no guarding, no rigidity, and no bladder distension. Local examination of the vulva showed a painful, soft swelling involving the left labia majora and minora, measuring approximately 5 × 6 cm. associated with a laceration on the inner surface of the left labia majora. The remainder of the gynecological examination was unremarkable.



FIGURE 1: Post-Traumatic Vulvar Hematoma



FIGURE 2: Laceration Of The Inner Surface Of The Lip

The patient was admitted to the hospital for close monitoring and observation due to a vulvar hematoma. Upon admission, routine laboratory investigations, including complete blood count, coagulation profile, and metabolic panel, were performed and found to be within normal limits, suggesting no underlying coagulopathy or systemic cause for bleeding. To further evaluate the extent and source of the hematoma, a pelvic CT angiography was conducted. Imaging revealed a spontaneously hyperdense hematoma localized to the left vulvar region, with dimensions of $75 \times 33 \times 57$ mm and an estimated volume of 73.3 mL. Importantly, there was no evidence of active contrast extravasation, indicating that the bleeding had likely ceased at the time of imaging.

Given the size and potential for local tissue compromise, surgical intervention was indicated. The patient underwent evacuation of the hematoma under appropriate anesthesia, and hemostasis was achieved without complications. The immediate postoperative period was uneventful, with stable vital signs and no signs of infection or recurrent bleeding. The patient was able to tolerate oral intake and ambulate without difficulty, allowing for discharge within 48 hours of admission.

At a scheduled follow-up consultation 21 days postoperatively, physical examination demonstrated complete restoration of vulvar anatomy, with well-healed tissue and no residual swelling or hematoma. The patient remained symptom-free during subsequent follow-up visits. After a total follow-up period of 10 months, the patient reported no introital dyspareunia, no development of labial synechiae, and

maintained normal sexual function, having become sexually active without complications. This favorable outcome highlights the effectiveness of timely surgical management and appropriate postoperative care in cases of large vulvar hematomas.



FIGURE 3 and 4: Appearance On Day 21 Post-Operative

3. DISCUSSION:

Post-traumatic vulvar hematoma represents a relatively rare clinical entity, as reported in the literature [12,13]. Although uncommon, it is important to recognize due to the potential for rapid progression, significant pain, and complications if left untreated. The most frequently reported etiologies include obstetric trauma, particularly during vaginal deliveries, sports-related injuries, traffic accidents, and vigorous sexual intercourse [1, 9, 13]. These mechanisms are well-documented and account for the majority of cases encountered in clinical practice.

In addition to these common causes, a number of unusual mechanisms have also been described, albeit less frequently. These include bites from humans or animals [7, 8], traumatic injuries caused by goring [8], motor vehicle accidents [9], and bicycle accidents [13]. Such cases often present diagnostic and therapeutic challenges due to their rarity and the atypical nature of the trauma. In the present case, the patient sustained trauma following a fall from a chair. To our knowledge, this specific mechanism has not been previously reported in the literature, highlighting the importance of documenting uncommon injury patterns for educational and clinical reference purposes. The combination of a detailed patient history and a careful clinical examination allowed for a rapid and accurate diagnostic orientation. The hematoma was measured using imaging techniques, and its volume was estimated at 73 ± 3 mL, calculated from the product of the longitudinal and transverse diameters. According to several authors, hematomas of this size are considered to represent a poor prognostic factor, as larger volumes are associated with a higher risk of tissue ischemia, pain, secondary infection, and delayed recovery [2, 3].

From a pathophysiological perspective, the hematoma observed in this patient is likely attributable to injury to the labial veins. These veins, which are tributaries of the internal pudendal vein, run within the superficial aponeurosis of both the anterior and posterior perineal triangles. Trauma to these vessels can result in rapid blood accumulation in the vulvar tissues, leading to the formation of large, tense hematomas that may compromise local circulation and cause significant discomfort [6]. Understanding this anatomical relationship is critical for both accurate diagnosis and effective surgical intervention.

Given the substantial volume of the hematoma, combined with the risk of progression and potential complications, immediate surgical management was chosen. This therapeutic strategy is supported by multiple studies [2,5,9], which emphasize that conservative treatment may increase the likelihood of secondary complications, including superinfection, recurrent hemorrhage, the need for blood transfusions, and prolonged hospitalization. In this patient, the surgical evacuation of the hematoma was successfully performed without intraoperative complications. The postoperative course was uneventful, and the patient was

closely monitored, allowing for discharge after 48 hours. This approach ensured both patient safety and optimal recovery.

4. REFERENCES

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