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Case Report

Non-obstetric traumatic vulval hematoma in a teenage girl

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ABSTRACT

Few occurrences of non-obstetric vulvar haematomas have been documented in the literature, making them uncommon. For their treatment, there are no clinical recommendations. Most of the time, they can be managed conservatively, but occasionally, surgery will be required. We describe the surgically treated patient who had a traumatic vulvar haematoma.

Keywords: Vulvar lesions, Vulvar, Vulvar discomfort, Vulvar mass, Trauma, Perineal, Huge haematoma, Evacuation, Expansion, Haematoma

INTRODUCTION

Blood leaking into tissue beneath an unbroken epidermis is called a haematoma.[1] Obstetric patients frequently suffer from vulvar haematomas. Nonetheless, a significant percentage of those instances have a traumatic origin, and they are treated differently. Non-obstetric vulvar haematomas can grow to size that could result in haemodynamic instability, even though majority of vulvar haematomas are tiny and have no additional importance.[2]

Adult women's labia majora are composed of fat deposits that shield the region's numerous blood arteries and nerve endings from harm. However, during childhood and adolescence, these tissues are not as well-protected, making vulvar injuries more frequent. Virginity, the insertion of foreign bodies, self-manipulation, and rough sexual practices are risk factors for vulvar haematomas. In postmenopausal women, hypoestrogenism

CASE REPORT

A 16-year-old girl in good health who had no known comorbidities or medications at the time of her visit arrived at our emergency room complaining of bleeding and perineal pain. She had suffered a traumatic trauma to her pubis while riding a bicycle four hours prior. The patient complained of acute pain that started right away, followed by enlargement of the vulva, bleeding, and trouble peeing (Figure 1). She didn't have any stomach ache or vomiting. The patient denied having experienced any recent sexual assault, vaginal instrumentation, or coitus. She experienced irregular menstruation until she reached menarche at the age of twelve. Upon physical examination, the patient was found to be nervous, with coloured sclera and no respiratory trouble. Her blood pressure was 100/60 mmHg, her pulse rate was 95 beats per minute, and her temperature was 37°6 C, indicating that she was afebrile. When her abdomen was palpated, there was no soreness.

Figure 1: Pre-operative picture of vaginal swelling.

Basic laboratory tests showed a normal WBC and platelet count along with a haemoglobin level of 12.2 g/dL. Within the guidelines, the INR/PT was normal. Parenteral antibiotics (ceftriaxone) and systemic painkillers (paracetamol and niflumic acid) comprise conservative initial therapy. Twice daily, a gynaecological povidone iodine solution was used for a lukewarm sitz bath. After four days, we do surgery because of the increased swelling and ongoing agony (Figure 2). A right labia minora wound was used to remove a sizable haematoma under TIVA.

Figure 2: Intra-operative picture evacuation of hematoma by linear incision.

The urethral meatus and vagina were intact. The cavity was irrigated and inspected for hemostasis, no further bleeding was noted. A Foley catheter was inserted in the bladder. The cavity was subsequently closed. The patient had an uneventful postoperative course and was discharge on postoperative day three. The patient was seen in follow-up at 2 weeks, vulva appeared symmetric without pain with the swelling completely resolved.

DISCUSSION

Vulvar haematomas in non-obstetric patients have been observed to occur 3.7% of the time.[3,4] Although isolated occurrences of traumatic vulva haematoma in teenagers have been reported, the true prevalence of these injuries in youngsters is unknown and is undoubtedly underreported in the literature. Direct perineal trauma that crushes the vulvar tissue beneath the pelvic fascia against the pelvic bones can cause vulvar haematomas in non-obstetric patients. A vulva haematoma following a height fall, saddle injury, sexual assault, insertion of a foreign body, and coitus is described by the majority of authors.[5] However, we are unaware of any description of shoes (hard rubber sandals) causing pubic damage. Since the pubic trauma in our patient happened while she was standing, we believe that the labia lesion resulted from an abrupt reflex flexion-adduction of immediately preceding the trauma with crushing the vulva against the pubic bones, which caused laceration and the formation of hematoma.[1]

The swelling in such cases generally follows the cleavage planes and may become large size because the subcutaneous tissue offers low resistance.[6] If bleeding takes place, as in this case, beneath the pelvic fascia and the levator ani, the latter is separated from the perineum. On the other hand, if the hematoma is on the pelvic fascia, it can spread below Poupart's ligament and continue retroperitoneally to the renal fossae.[5] Although there is no anatomical explanation, 70% of all reported vulvar hematomas appear on the right labius (as in our case).[7] This mechanism is particular and has also been described by Ernest et al.[2] Though perineal trauma has been regarded as the main cause, vulva hematomas can also be as a result of a spontaneous rupture of blood vessels in the perineum due to atherosclerosis.

Moreover, vulvar haematomas are particularly dangerous in children and adolescents whose vulva is free of fatty deposits. These fat deposits are physiologically present in adult women and serve as vulva vessels and nerves' defence against injury. Other risk factors that have been identified in adolescents include rough sex, self-manipulation, insertion of foreign bodies, and virginity. The occurrence of the huge haematoma and its growth in our instance can be explained by the unique architecture of the vulva in children and virginity.

Although there are no universally accepted guidelines for the best course of action, vulvar haematomas are typically managed conservatively, surgically, or by arterial embolisation.[8] Numerous publications claim that the size of the haematoma, the involvement of nearby organs, the level of haemodynamic stability, the acute haematoma expansion, and the ongoing vulva pain all influence the therapeutic decision. When a minor haematoma does not enlarge, conservative treatment is advised. It involves giving patients sitz baths, antibiotics, anti-inflammatory medications, and analgesics while they are in the hospital, and it works well.[9] Nevertheless, there are certain drawbacks, including extended hospital stays, a higher requirement for medicines, and an elevated risk of infection.

After four days of conservative treatment for our vulva haematoma, we chose to undertake surgical evacuation and repair due to the hematoma's growth and ongoing agony. According to some writers, this therapeutic method was adequate; therefore, in order to minimise bleeding issues, surgical therapy should be postponed. It was mentioned that if the haematoma continues to grow and the pain continues, the cautious approach has typically failed. For others, vulva haematomas respond well to primary surgical intervention, when the haematoma was removed and permanent haemostasis was achieved. Early surgical intervention lowers the risk of infection and length of hospitalisation.[10]

Then, embolisation is characterised as the final effective therapeutic choice.[12,13] It is carried out following enhanced vulvar haematomas, which can heal even following a

skilfully executed surgical procedure. Active bleeding vessels that are hard to find or may have several foci can be investigated and located using arterial CT. When opposed to surgical management, this procedure has the advantage of requiring fewer inpatient days. Its exorbitant cost and lack of technical platform make it impossible to use in low-resource settings and in current practice.

CONCLUSION

Serious morbidity and mortality concerns can arise from a substantial traumatic vulvar haematoma that is not diagnosed or treated right away. Prompt care greatly reduces the risk of infection, abscess formation, skin necrosis, and extended hospitalisation in low-resource settings. The clinical appearance of the patient dictates the therapy strategy. To provide thorough treatment guidelines that are both evidence-based and effective, more study is required.

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