



(CASE REPORT)



## Vulvovaginal haematoma presenting in the puerperium: A case report

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### Abstract

**Background:** Vulvovaginal haematoma is an uncommon complication of childbirth that can cause maternal death if not properly managed. We present a case of a large vulvovaginal haematoma managed surgically with a good outcome.

**Clinical Presentation:** JP was an unbooked 34 year old para 2 woman referred from a maternity home to Bethesda Family Hospital on account of a left-sided vulva swelling of two weeks duration following a spontaneous vaginal delivery of a live male baby that weighed 4.3 kilogrammes. She sustained a vaginal tear which was repaired by the attending midwife. Vaginal examination showed a firm and tender swelling of size 12 cm by 14cm involving the left labia majora and minora and extending to the perineal region and vagina. A diagnosis of vulvovaginal haematoma was made and she was educated on her condition and the treatment options. She was haemodynamically stable and the full blood count was normal. She was placed on analgesics and antibiotics, catheterized, and the haematoma evacuated under ketamine cover. She was discharged home on the second day.

**Conclusion:** Surgical management of large vulva haematoma at the primary care level involves counselling, institution of antibiotics and analgesics and appropriately located incisions and evacuation of clots. This leads to quick recovery with minimal scarring, pain and dyspareunia.

**Keywords:** Vaginal tear; Vulvovaginal haematoma; Surgical evacuation; Cosmetic incision

### 1. Introduction

Vulvovaginal haematoma is an uncommon complication of childbirth with the potential of causing maternal morbidity and mortality if mismanaged. The vulva has a rich blood supply from the pudendal vessels. Improper haemostasis during repair of perineal tears or an episiotomy wound or failure to take precaution while suturing the apex of the episiotomy may result in a large vulvovaginal haematoma due to the distensible nature of the tissue. The management can be conservative or surgical depending on the prevailing circumstances. We present a case of a large vulvovaginal haematoma managed surgically with a good outcome.

### 2. Case Report

JP was a 34-year old Para 2<sup>+0</sup> lady who presented with a history of severe pains, difficulty in walking, progressive swelling at the left side of the vagina, inability to sit properly on her two buttocks and difficulty in passing urine of two weeks duration. The illness started after a vaginal delivery of a baby weighing 4.3 kilograms during which she had a tear at the left side of the vagina which was repaired by the attending midwife. The swelling and pain commenced immediately. She reported to the midwife and was placed on paracetamol, metronidazole tablets and sitz bath three

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times a day. The swelling continued to increase in size and the pain progressively worsened. She developed difficulty in passing urine and stool, as well as inability to sit properly hence her presentation to the hospital. Her first pregnancy ended with a caesarean section due to obstructed labour of a large baby. She could not pay the hospital bill with ease so she decided to deliver at a maternity where she was assured she would deliver like the “Hebrew women”. There was no associated fever.

On examination, she was healthy looking, not pale, not jaundiced and afebrile to touch. She sat on the right side of the buttocks in discomfort. Vaginal examination showed a huge firm and tender swelling of size 12cm by 14 cm involving the left labia majora and minora, extending to the perineal region and up into the vagina, partially obliterating it. The scar of the repaired vaginal laceration was visible but healed. Rectal examination showed prolapsed haemorrhoids at the anal verge and a rectum filled with hard brownish stool. Ultrasound scan was not available to aid diagnosis. A needle tap of the swelling yielded denatured blood. A diagnosis of a vulvovaginal haematoma was made.

She was counselled on her condition and advised on the modalities of management and she consented to having surgery. She was immediately admitted and a urethral catheter was passed. An urgent full blood count was requested and it revealed normal parameters. A plan was made to evacuate the haematoma surgically. This was done by a vertical incision on the left vaginal sidewall. About 1.5 litres of blood clots was evacuated. After ensuring that there was no further haemorrhage, the edges of the incision were secured similar to marsupialisation with five interrupted 2-0 chromic catgut sutures to allow possible continued drainage.



**Figure 1** Vulvovaginal haematoma (a) Before drainage (b) After drainage

Her discomfort resolved immediately post-surgery and she had an uncomplicated postoperative course. She was discharged home on the second day in good clinical state and given a 6 week post-natal appointment. At the six week post-natal visit, she had no complaint. She had stopped draining lochia and had resumed coital activity. Vaginal examination revealed normal vulva and vagina. Her baby was being exclusively breast fed, adequately immunized for age, healthy looking and weighed 4.8 kg. She was counselled on proper antenatal care and family planning.

### 3. Discussion

A puerperal genital haematoma is an uncommon occurrence, with a study reporting an incidence of 1 in 1113 deliveries [1]. They may be classified as either infra levator or supra levator [2].

Infra levator haematomas are commonly associated with vaginal deliveries, and they occur below the levator ani muscle, usually involving the lower vagina, the vulva and the perineal region. Supra levator haematomas on the other hand are formed in the broad ligament and may be a result of an extension of a cervical tear, a tear in the vaginal fornix or a uterine rupture. They are more likely to follow instrumental vaginal deliveries, particularly the vacuum extraction, but rarely may follow spontaneous vaginal births [2,3]. Of all the puerperal haematomas, the vulvovaginal type is the most commonly encountered [1]. The incidence of vulvovaginal haematoma in the obstetric population ranges from 1:300 to 1:1500 deliveries [4].

Receiving an episiotomy is a significant risk factor for developing a genital haematoma, while foetal macrosomia (Birth weight >4.5kg) and maternal age >29 years have been reported as independent risk factors. Other predisposing factors

include primiparity, multiple gestation, and hypertensive disease in pregnancy, coagulopathy, instrumental vaginal delivery and a prolonged second stage of labour [1, 5]. These haematoma may also be caused by vulvar varicosities themselves or their treatment (such as vulvar phlebectomy and ovarian vein embolization) [6]. There have also been cases of vulvovaginal haematoma following consensual sexual intercourse in both the pregnant and non-pregnant states [7, 8].

The presentation may be rapid following trauma, or delayed due to pressure necrosis of tissues with subsequent vessel rupture. Bleeding of arterial origin is often secondary to injury to one of the branches of the pudendal artery, including the posterior labial, transverse perineal, or posterior rectal branches [4].

Puerperal vulvovaginal haematoma usually present with pain at the episiotomy site. The pain is caused by compression and infiltration of the haematoma which frequently may involve the whole perineum, with a mass which distorts the anatomy of the vulva. There may also be continued bleeding or a history of urinary retention and anal incontinence [2, 5]. In the index patient the pain was severe enough to prevent her sitting properly, and in addition, she suffered from inability to pass urine and faecal impaction. Patients may also complain of severe dizziness or weakness and in some cases may present with features of cardiovascular collapse or shock [3, 9].

There is no consensus statement or best practice guideline on the protocol for management of post-partum vulvovaginal haematoma, the management therefore remains controversial [2, 5].

Some authors have sub-divided management into conservative and surgical. Based on this, smaller haematomas <3cm are managed conservatively with ice packs and analgesics, and an indwelling catheter may be passed. The majority of vulvar hematomas are conservatively managed and they usually progress satisfactorily with minimal treatment measures. For larger (>12 cm) and continuously expanding haematoma, or those large enough to cause urologic and neurologic symptoms, management may involve immediately establishing IV access, FBC, and grouping and cross-matching blood [10].

The conventional management protocols however involve promptly incising the mass and evacuating the blood and clots, ligating bleeders, and packing the vagina [11].

In cases of infra levator haematoma the source of the bleeding is rarely identified, thus requiring deep sutures at the haematoma base and vaginal packing for 12-24 hours [10]. Imaging such as ultrasound scan, MRI and computed tomography where available may aid arriving at a definitive diagnoses and investigating the site, size or expansion of a haematoma [10].

In some instances, measures used for conservative management may prove to be unsuccessful, and attempts to search for specific bleeding vessels may be impossible owing to distortion and friable tissues. Such situations may warrant more invasive procedures to arrest bleeding in the form of angiographic embolization or trans-catheter arterial embolization as have been done in cases of tumours, vascular malformations, and pelvic trauma [11].

Small haematomas have been known to resolve spontaneously. However in situations requiring drainage, draining and occluding the dead space with vaginal packing for 24 hours has been known to be sufficient in a majority of cases [1].

A route through the vaginal wall should be used to drain haematomas in the supra levator peri-vaginal space, whereas those in the infra levator peri-vaginal space can be drained through the perineum [12]. In this case, the haematoma was drained through an incision on the vaginal wall with adequate healing and a satisfactory outcome.

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#### **4. Conclusion**

Surgical management of large vulva haematoma at the primary care level involve counselling, institution of antibiotics and analgesics and appropriately located incision and evacuation of clots. This leads to quick recovery with minimal scarring, pain and dyspareunia.

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#### **Compliance with ethical standards**

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*Disclosure of conflict of interest*

The authors declare that there is no conflict of interest

*Statement of informed consent*

A written informed consent was obtained from the patient for publication of this case report.

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