Case Report

# ANTEPARTUM VULVA HAEMATOMA: SURGICAL INTERVENTION AND SUBSEQUENT VAGINAL DELIVERY.

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## Abstract

**Background:** The vulva is not a common site of injuries due to its location and the protective effects of the spontaneous adduction of the thighs which prevents direct trauma to the vulva. Obstetric vulva haematomas are usually seen following delivery as a result of soft tissue injuries or iatrogenic injuries from episiotomies.

**Case Presentation:** A 27-year-old unbooked $G_5P_4^{+0}$ (4 living children) at 32weeks gestational age who presented to the emergency unit with complains of vulva pain and mild bleeding following a road traffic accident in which she sat astride on a motor bike. She had examination under anaesthesia, haematoma evacuation and application of haemostatic stitches. She was placed on analgesics, antibiotics, tocolytics and haematinics. Vulva swelling resolved and she was discharged after 48hours on admission in good health condition.

**Conclusion:** Vulvar haematomas, although not very common may occur during and outside pregnancy from a variety of causes like blunt trauma as in the case discussed. Occasionally these haematomas may be potentially life-threatening and may require urgent surgical intervention for haematoma evacuation and to secure haemostasis.

**Keywords:** vulva haematoma, road traffic accident, life-threatening, haematoma evacuation, haemostatic stitches.

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## INTRODUCTION

The vulva is not a common site of injuries due to its location and the protective effects of the spontaneous adduction of the thighs which prevents direct trauma to the vulva. However, some cases of both obstetric and non -obstetric vulva haematomas have been reported, but the actual incidence is not known. Obstetric vulva haematomas are usually seen following delivery as a result of soft tissue injuries or iatrogenic injuries from episiotomies.[1,2] Non-obstetric vulva haematomas on the other hand are usually due to direct trauma to the perineum[1,3], sexual intercourse (forceful or consensual)[4]. The clinical features usually include severe pain in the vulva, vulva swelling which may be rapidly increasing with or without bleeding or laceration.

Options for treatment can be either conservative (for small non-progressing haematomas)[5] or surgical (for huge or rapidly progressing haematomas which require prompt evacuation)[6]. The outcomes of either management options are good.[6,7]

## CASE PRESENTATION

A 27-year-old unbooked $G_5P_4^{+0}$ (4 living children) at 32weeks gestational age who presented to the emergency unit with complains of vulva pain and mild bleeding following a road traffic accident in which she sat astride on a motor bike. She said she

bumped repeatedly on the motor bikes seat during the course of the incident. There was no bleeding from any other body site or orifice. No abdominal pain, no drainage of liquor and she still felt adequate foetal movements.

On examination she was in obvious painful distress, afebrile (36.8°C), not pale, anicteric, not dehydrated and no pedal oedema. Her respiratory rate was 20 cycles per minute with the chest being clear clinically. Her pulse rate was 72 beats per minute and her blood pressure was 120/80mmhg. There was no abdominal or uterine tenderness and there was no uterine contraction. The symphysio-fundal height was 30cm which was compatible with her gestational age of 32 weeks. A single intrauterine foetus was palpated in longitudinal lie and cephalic presentation. The foetal heart rate was 144 beats per minute and it was regular. The vulva was smeared with blood but there was no active bleeding. A left vulva haematoma of about 4 cm in diameter was noticed. There was no obvious laceration in the vulva or vagina. The cervical os was closed and there was no liquor drainage.

Her packed cell volume was 33%, urgent abdominal ultrasound scan revealed a normal cyesis at 32 weeks + 4 days gestational age and ruled out broad ligament haematoma. She was admitted for close observation and given analgesics. About 30 minutes into the admission she was in severe pain and the haematoma had increased significantly but the foeto-maternal vital signs were normal.

She subsequently had examination under anaesthesia, haematoma evacuation and application of haemostatic stitches. Intraoperatively, there was a huge left vulva haematoma [Figure 1] of about 10 cm x 10 cm that contained about 300 ml of clotted blood which was evacuated through an incision on its most bulging aspect on the vulva. After the evacuation, diffuse bleeding points from the wall of the haematoma were ligated with chromic 2-0 sutures. The haematoma cavity was closed with chromic 2-0. The total blood loss was about 700 ml. An indwelling urinary catheter as well as a vagina packing was left insitu for 12 hours. She was placed on analgesics, antibiotics, tocolytics and haematinics. Vulva swelling resolved and she was discharged after 48 hours on admission with a packed cell volume of 32%. She subsequently presented at term in spontaneous labour and had a successful vaginal delivery of a live male neonate that weighed 2.9 kg without any episiotomy, vulva or perineal tear.

**Figure 1: Huge left vulva haematoma.**

## DISCUSSION

This was a 32-week pregnant woman who developed acute vulva haematoma following repeated trauma to the vulva while riding on a commercial motorcycle.

The loose connective tissue and smooth muscles of the vulva are richly supplied by branches of the pudendal artery; a significant branch of the internal iliac artery[9]. It drains into the labial veins, which are tributaries of the internal pudendal veins. Injury to labial branches of the internal pudendal artery, which is located in the superficial fascia of the anterior and posterior pelvic triangle, can cause significant vulvar hematomas[10].

The factors that contributed to the development of the haematoma in this case include the loose areola connective tissue in the vulva that permits room for expansion, increased blood flow to the vulva and perineum in pregnancy and the repeated blunt trauma that led to rupture of the blood vessels in the vulva. With uncontrolled extravasation of blood and room to expand, a worsening haematoma was inevitable.

The incidence of vulvar hematomas including those in pregnancy and delivery is not known as there are very few reports of the same [10]. A similar case of traumatic vulva haematoma in pregnancy was reported by Ekweani et al in a 36-week pregnant unbooked multipara who was also managed surgically and subsequently had a spontaneous vaginal delivery[3]. In addition to trauma[3], vulva haematomas have been linked to sexual intercourse (consensual or forced), child birth and in some cases it may be spontaneous [4,10].

Risk factors for development of obstetric vulva hematoma include nulliparity, age >29 years, birth weight of the baby >4 kg, instrumental vaginal delivery, prolonged labour, preeclampsia and bleeding diathesis[1]. About 87% of the hematomas occur following repair of episiotomies or vaginal lacerations[2].
Obstetric hematomas can be vulval/vulvovaginal, paravaginal, pelvic/sub-peritoneal. A high index of suspicion is required to diagnose and manage these haematomas promptly before signs of cardiovascular collapse develop.

Vulva haematomas can be managed either conservatively or surgically. For rapidly expanding life-threatening haematomas, surgical treatment is advocated, and it remains the gold standard not just for relief of symptoms but for its life saving potential. Surgical options include EUA and evacuation with haemostatic stitch application as performed in the index case, as well as arterial embolization[7].

Conservative management has been supported by some authors as the outcome is said to be favourable[7]. However, it is reserved for small non-progressing haematomas in haemodynamically stable patients[5]. In the case discussed, the patient was initially being managed conservatively but with the rapidly increasing haematoma she was quickly offered surgical treatment. Proper care during the procedure obviates the need for premature deliveries, shortens hospital stay and improves patient satisfaction. These include adequate analgesia, antibiotics, transfusion where indicated as well as administration of tocolytics to prevent uterine contractions which may progress to preterm labour and delivery.

## CONCLUSION

Vulvar haematomas, although not very common may occur during and outside pregnancy from a variety of causes like blunt trauma as in the case discussed. Occasionally these haematomas may be potentially life threatening and may require urgent surgical intervention for haematoma evacuation and to secure haemostasis which will in turn reduce hospital stay, the risk of complications and improve overall patient outcome and satisfaction.

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