International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Eze IO et al. Int J Reprod Contracept Obstet Gynecol. 2023 Dec;12(12):3646-3650
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20233649

Case Report

A rare case of life threatening non-obstetric-non-traumatic vulvar-vaginal haematoma secondary to suspected spontaneous rupture of the right pudendal artery: surgical management in a reference hospital in Southern Nigeria

Innocent Okafor Eze[1]*, Noble Chidiebere Anyanwu[2], Ugochi Ogbonneya Nzeribe-Abangwu[1], Victor Cletus Igboezue[3], Rufai Muhammed[3], David Ugonna Uzoha[1]

[1]Department of Obstetrics and Gynaecology, Nigerian Navy Reference Hospital, Ojo Lagos, Nigeria
[2]Department of General Surgery, Nigerian Navy Reference Hospital, Ojo Lagos, Nigeria
[3]Department of Radiology, Nigerian Navy Reference Hospital, Ojo Lagos, Nigeria

Received: 04 October 2023
Accepted: 01 November 2023

***Correspondence:**
Dr. Innocent Okafor Eze,
E-mail: docinno.ie@gmail.com

ABSTRACT

Vulvar haematoma due to obstetrics and traumatic causes have been reported. However, non-obstetrics-non-traumatic vulvar-vaginal haematoma is very rare yet could be life threatening. Good management and outcome may be challenged by low index of suspicion, inexperience and lack of standard guideline for care. We report a rare case of life threatening non-obstetric-non-traumatic vulvar-vaginal haematoma secondary to suspected spontaneous rupture of the right pudendal artery in a 35-year-old woman which presented as emergency with diagnostic challenges and was successfully surgically managed. This report draws attention of clinicians to this rare but important clinical scenario which can present with diagnostic challenges. It further highlights different approaches to treatment but emphasizes surgical treatment as key to quick recovery with lesser morbidities

Keywords: Vulvar haematoma, Non-obstetrics-non-traumatic vulvar-vaginal haematoma, Pudendal artery rupture

INTRODUCTION

A haematoma is a collection of blood beneath an intact epidermis that presents as a swollen fluctuant lump. Vulvar-vaginal hematomas due to obstetric and traumatic causes have been reported, but cases due to spontaneous rupture of blood vessels are rare.[1] Spontaneous vascular rupture could result from aneurysm, varicosities, and infection.[2] The internal pudendal artery, a branch of the anterior division of the internal iliac artery, is the arterial trunk that supplies blood to all the perineal structures inferior to the pelvic diaphragm. Thus, bleeding in the region including the vulvar is most likely coming from the internal pudendal vessels or its tributaries.

The rarity of vulvar-vaginal haematoma resulting from spontaneous vascular rupture underscores the scarcity of case reports, poor index of suspicion, and lack of standard diagnostic and management approach. When the more common causes (obstetrics and traumatic) of vulvar-vaginal haematoma are ruled out, the rare cause, spontaneous vascular rupture becomes a logical working diagnosis of exclusion which can be supported with imaging studies and clinical findings. Meanwhile, such a scenario may lead an inexperienced physician to doubt the

patient history which may lead to lack of trust, confusion and tension among the patient, patient relatives and care-givers, resulting in mismanagement. We report a rare case of acute life threatening non-obstetric-non-traumatic vulvar-vaginal haematoma which presented as emergency with diagnostic challenges and was successfully surgically managed. The Patient written informed consent was obtained to report this case.

CASE REPORT

A 35-year-old woman who presented to the emergency unit of a reference hospital with complaints of acute perineal swelling. Swelling started about 12 hours before presentation; it progressively worsened with associated severe pain and inability to pass urine, and hence, patient presented to a reference hospital for expert care. There was no history of trauma of any kind or coitus before the appearance of symptoms. Her last childbirth was 5 years ago and was not eventful. She was not on any antiplatelet or anticoagulant medications.

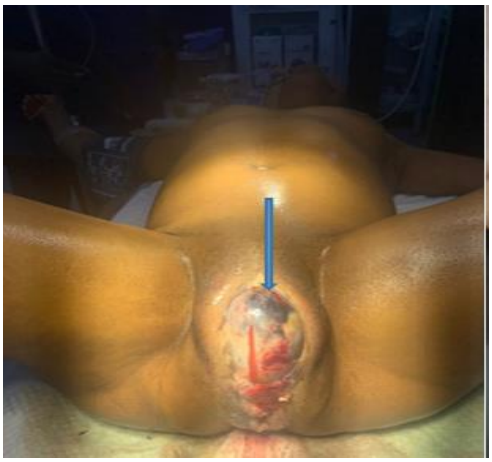

Figure 1: Haematoma with ischaemic necrosis.

Figure 2: Tension tear in the posterior fouchette.

At presentation she was conscious, apprehensive and in severe painful distress. She was unable to walk, and could only lie in the supine position with abducted hips and flexed knees.

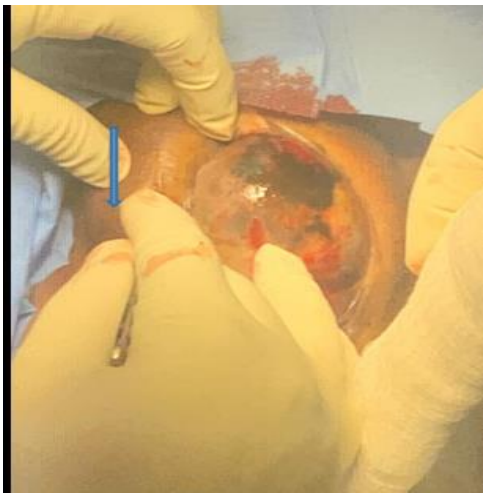

Figure 3: Incision in the most fluctuant part.

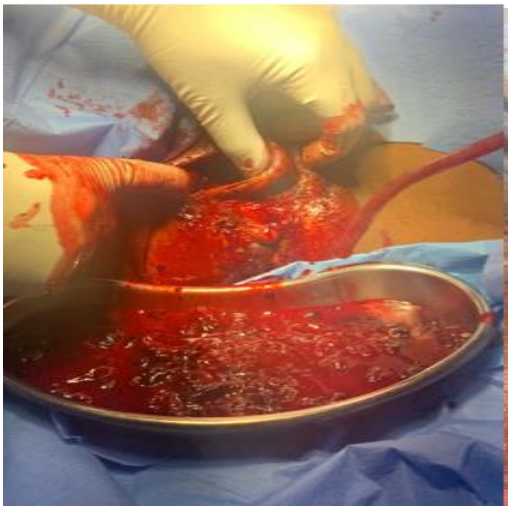

Figure 4: Massive blood clots.

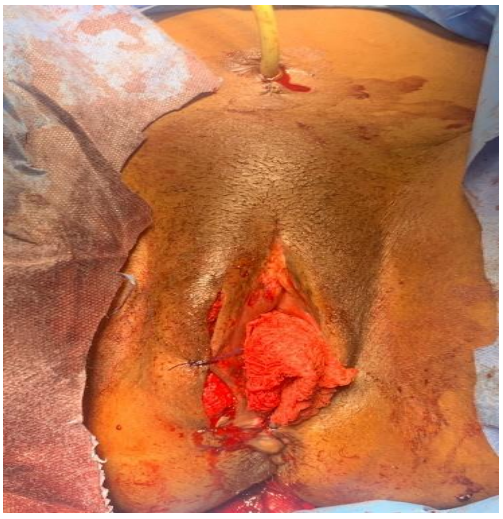

Figure 5: Haemostatic packing.

She was markedly pale and moderately dehydrated. The blood Pressure was 90/70 mmHg, pulse rate was 110 bpm, moderate volume and normal rhythm.

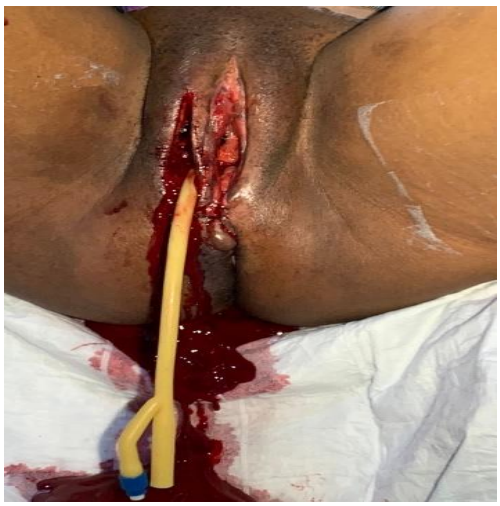

Figure 6: Wound drain.

Figure 7: Suprapubic cystostomy.

The hemoglobin concentration was 7 g/dl. The perineum revealed massive swelling of about 20cm in widest diameter (Figure 1), completely obliterating the vaginal introitus and, the anal canal and making urethral catheterization impossible. The swelling was tensed, causing spontaneous laceration with bleeding at the posterior fouchette (Figure 2) and the clitoridal area. There was out-pouching of the vaginal wall completely masking the vestibule with areas of ischemic necrosis appearing like 'bulging fetal membrane with cephalic presentation' (Figure 1-2). The pelvic ultrasound was normal while the mass showed hypo-echoic collection suggesting hematoma inferior to the pelvic diaphragm. Computed tomography scan with contrast angiography revealed enhancement beyond the right internal iliac vessel suggesting vascular rupture of right internal iliac tributaries.

The patient was moved to the theatre for evacuation of the haematoma and exploration of the mass with the general surgeon. A suprapubic catheter was inserted to provide continuous drainage of the bladder.

Under subarachnoid block, an approximately 8 cm vertical incision was made in the most fluctuant part of the swelling (Figure 3-4) on the right labia majora. Massive blood clots and collections of about 2 litres (Figure 4) were evacuated from the mass relieving the tension and leaving a large dead-space of the right ischioanal fossa with redundant vulvar-vagina showing areas of ischemic injury. Haemostasis was achieved with vicryl-0 sutures. Dead space was packed with sterile abdominal mops soaked in diluted adrenaline solution (Figure 5). The patient was transfused with 2 units of blood in the theatre and 2 more units post operatively. Postoperative management included intravenous fluids, antibiotics, and rectal diclofenac. Immediate post-operative condition was satisfactory. The hemostatic packing was removed 24 hour post-surgery and replaced with wound drain which was removed after 48 hours (Figure 6-7). The suprapubic catheter was replaced with a urethral catheter that was removed on day 7 post surgery. The wound was closed on day 3 with interrupted matrix nylon suture which was removed on day 10 post surgery. The patient was discharged in stable condition with a hemoglobin estimate of 10g/dl on the day 10 after surgery. Follow up at the clinic 2 weeks later was satisfactory (Figure 8).

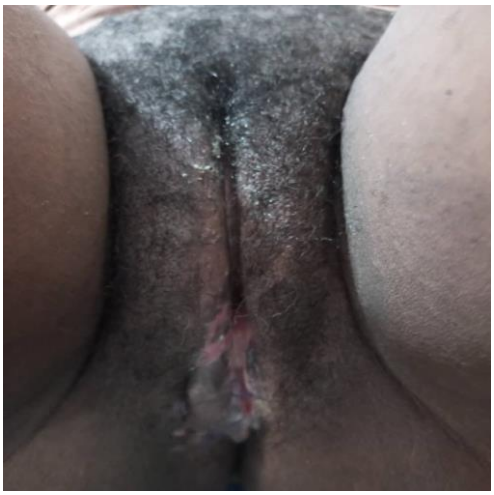

Figure 8: The vulvar on 2 weeks clinic follow up.

DISCUSSION

Reported cases of vulvar haematoma usually result from obstetric or traumatic causes.[2,3] Obstetric causes of vulvar haematoma include, episiotomy and birth-related soft tissue injury with incidence of 1-2 per 1000 deliveries.[3,4] Non-obstetric causes usually result from trauma to the pelvis and or perineum sustained due to fall from height, saddle injury, sexual and physical assault, insertion of a foreign body and sexual activities including consensual

cunnilingus and coitus.[2,4,6-8] This accounts for about 0.8% of gynecological problems.[2]

Vulvar haematoma not related to obstetric injury or physical trauma are very rare and only a few have been reported in the literature. To the author's best knowledge, as at the time of reporting this case, only two of such cases were found in the literature. The first was due to spontaneous rupture of the internal iliac artery, while the second resulted from spontaneous rupture of a pseudoaneurysm of the pudendal artery.[1,2] In our case, a spontaneous rupture of the tributary of the right pudendal artery was most likely. Spontaneous rupture of the pudendal artery can occur exclusively at the site of an aneurysm and is generally related to atherosclerosis.[2] Infection or connective tissue disease is rarely identified but can occasionally cause aneurysms.[2,7] In our index case, no such risk factors were found. For unknown reasons, most cases of vulvar haematoma commonly affect the right side of the perineum same was the case with our index patient.[1,2,9]

Although most vulvar haematomas are small and rarely life- threatening it occasionally present an acute form which can rapidly grow in size causing hemodynamic instability and pose threat to the life of the patient.[3-8] Bleeding into the vulva is largely restricted by the Colles fascia and the urogenital diaphragm; a hematoma in this area will be visible on physical examination.[9,10] Since the Colles fascia exerts little resistance, vulvar hematomas can grow to become 15 cm or more in diameter.[7] In our index patient, the haematoma size was about 20 cm. Pain and swelling are the most common presenting complaint, and bleeding can occur depending on etiology and intensity.[1-8] Our patient presented with excruciating pain and mild bleeding from the tear due to intensity of swelling. She was hemodynamically unstable and received 4 units of whole blood.

The diagnosis of vulvar haematoma is largely clinical. History most commonly point to the etiology (especially the obstetrics and traumatic causes), and physical examination easily gives away the diagnosis. However, in the index case history ruled out the common etiology leaving the rare spontaneous vascular rupture as working diagnosis of exclusion. Due to the low index of suspicion, this presented confusion among the patient, relatives and the physician, with initial diagnostic challenges. Laboratory evaluation of patients with vulvar haematoma can include complete blood count including platelet and clothing profile. Blooding grouping and cross-matching may be necessary for transfusion like in our case. Relevant imaging studies may include ultrasonography, CT scan and MRI. In our case, pelvic and transperineal ultrasound and CT angiography were used to rule out pelvic pathologies and confirm infra-pelvic haematoma most likely from spontaneous rupture of the right internal pundendal artery or its tributaries.

Currently, there are no standard guidelines for management of vulvar hemorrhages. Treatment of vulvar haematoma may be conservative, surgical, and/or radiological depending on presentation, severity, aetiology, facility, and expertise. Most vulvar hematomas are small and can be conservatively treated using ice packs, local compressions, bed rest, and analgesics and follow-up.[8,9] However, large and acutely progressing cases with hemodynamic instability, as in the index case is an emergency that requires prompt diagnosis, timely resuscitation, surgical and/or radiological intervention to prevent further morbidities and mortality.[3,6,7]

Resuscitation with whole blood and fluid is lifesaving in cases with hemodynamic instability. Surgery is indicated to evacuate the blood collection, relieve tension, obstructions (acute urinary and fecal retentions) and ischaemic injuries that may complicate haematoma. Our index patient had acute urinary retention and vaginal ischaemic injuries. Surgical exploration also offers the opportunity to ligate actively bleeding vessels and directly observe the extent of the injury. We successfully used abdominal mop soaked in diluted adrenaline to contain capillary oozes that are not amenable to ligation.

Wound drain was used for few days post-surgery to forestall and monitor blood collection in the redundant dead-space which may lead to infection and poor wound healing. This has been shown to be useful for large haematomae.[9] Generally, the surgical approach has been shown to result in quicker recovery and lesser morbidities, including infections, compared to the conservative method.[1-7] Interventional radiology through coil-embolism have been successfully used to occlude a spontaneously ruptured internal iliac artery leading to vulvar haematoma followed by surgical evacuation.[2] This could be more useful when surgery could not effectively arrest bleeding due to poor access, etc. However, surgical evacuation of haematoma remains necessary. For most cases of vulvar haematoma, recovery and prognosis are generally good with a timely diagnosis and prompt management.[1-9]

CONCLUSION

Non-obstetrics-non-traumatic vulvar-vaginal haematoma is very rare yet could be a life-threatening gynaecological emergency. A timely diagnosis and prompt intervention is key to good outcome. However, this may be challenged by poor index of suspicion, inexperience and lack of standard guideline for care. This case adds to the very few reported cases of vulvar-vaginal haematoma resulting from spontaneous vascular rupture. It draws attention of clinicians to such rare but important clinical scenario and provides effective approach to management.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Hong HR. A case of vulvar haematoma with rupture of the pudendal artery. Obstet Gynecol Sci 2014; 57(2):168-71.
2. Eleanor E, Philip D, Nathan L. Vulvar haematoma secondary to spontaneous rupture of the internal iliac artery: clinical review. Am J Obstet Gynecol. 2009;12: 13-8.
3. Virgili A, Bianchi A, Mollica G, Corazza M. Serious hematoma of the vulva from a bicycle accident: a case report. J Reprod Med. 2000;45:662-4.
4. Ridgway L. Puerperal emergency: vaginal and vulvar hematomas. Obstet Gynecol Clin North Am. 1995; 22:275.
5. Mangwi AA. Non-obstetric vulva haematomas in a low resource setting: two case reports. Pan Afr Med J. 2019;33:314.
6. Awoleke JO, Ipinnimo OM. Vulvovaginal infralevator haematoma mimicking the Second Stage of Labour. Case Rep Obstet Gynecol. 2017;2017:806.
7. Eze IO, Salihu MJ, Innoeze CU, Elegbua CO, Afolayan ST, Adaji JA, et al. Consensual coital laceration of the posterior vaginal fornix with hemorrhagic shock in a teenage girl: diagnostic and management challenges. Afrimed J. 2022;8(1):34-7.
8. Rabinerson D, Fradin Z, Zeidman A, Horowitz E. Vulvar hematoma after cunnilingus in a teenager with essential thrombocythemia: a case report. J Reprod Med. 2007;52:458-9.
9. Mara LA, Estrella HH, Sandra BA, María José DS. Non-obstetric traumatic vulvar hematoma: Conservative or surgical approach? A case report. Case Rep Women Health. 2019;22:109.
10. Sherer DM, Stimphil R, Hellmann M, Abdelmalek E, Zinn H, Abulafia O. Transperineal sonography of a large vulvar haematoma following blunt perineal trauma. J Clin Ultrasound. 2006;34(6):309-12.

Cite this article as: Eze IO, Anyanwu NC, Nzeribe-Abangwu UO, Igboezue VC, Muhammed R, Uzoha DU. A rare case of life threatening non-obstetric-non-traumatic vulvar-vaginal haematoma secondary to suspected spontaneous rupture of the right pudendal artery: surgical management in a reference hospital in Southern Nigeria. Int J Reprod Contracept Obstet Gynecol 2023;12:3646-50.