Case report

A penetrating gravitational bullets (stray bullets, falling bullets) injury to the clitoris: A case report

Adil Barut *, Zeina Ahmed Hirsi, Cihan Çelik, Hodan Abdi Hassan

Obstetrics and Gynecology Department, Radiology Department, Somali-Mogadishu Recep Tayyip Erdogan Research and Training Hospital, Mogadishu, Somalia

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ABSTRACT

Introduction and importance: Vulvar penetrating trauma is a rather uncommon occurrence (1). Firearm injuries caused by low-velocity gravitational bullets are a common cause of injuries in war-torn countries such as Somalia (2) (Campbell and Wilbert, 2022). These types of injuries are inflicted on bystanders by wayward bullets. No standard consensus on the appropriate management of vulvar penetrating trauma has been established (3). Herein, we report the successful management of an impacted bullet in the clitoris by a simple incision under local anesthesia. The principles of vulva and clitoris bullet trauma management are discussed. In our case, we thought it to be rare and interesting, considering its occurrence.

Case presentation: In this report, a 24-year-old woman (gravida 2, para 2) suffered from a vulvar area penetrating bullet injury. Imaging revealed that the foreign body was confined to the clitoris, and no evidence of other parts of the body. Under local anesthesia, the bullet was accessed and removed from the clitoris by performing a minor incision. No complications were observed following the surgical removal of the bullet.

Clinical discussion: Non-obstetric vulva trauma is an extremely rare occurrence. Typically, the cause of non-obstetric vulvar trauma includes sports-related injuries, straddle injuries, and midline splitting injuries. To the best of our knowledge, this case is unique due to the bullet being retained in the clitoris. The treatment of the foreign body is mostly surgical removal. Under local anesthesia, this patient underwent complete surgical removal of the metallic foreign body. During surgical excision, care should be taken not to damage the urethra and other pelvic issues.

Conclusion: To the best of our knowledge, this is the first wayward bullet (not intended for the patient) injury penetrating the vulvar area with a retained bullet in the clitoris. In our case, we thought it to be rare and interesting, considering its occurrence.

1. Introduction

Overall, gunshot injuries to the vulva are extremely rare and are typically seen in battlefield trauma or large urban areas with criminal implications. Tired bullet injuries are caused by low-velocity injuries, commonly seen in residential areas in war-torn countries such as Somalia. There is no consensus in terms of removing or retaining foreign bodies such as shotgun pellets [3]. Herein, we reported the successful management of a vulvar area with a retained bullet lodged in the clitoris through a simple incision under local anesthesia. This case report has been reported in line with the SCARE 2020 criteria [6].

2. Case presentation

A 24-year-old woman (gravida 2, para 2) presented to the gynecology and obstetrics department with severe vulvar pain due to a vulvar area penetrating bullet injury occurring an hour earlier. The patient reported that she was sitting in her living room when the tired bullet entered the living room through the roof. She had no known history of medical disease.

On physical examination, the patient appeared well, the abdomen was soft, the temperature was 36.7 °C, the pulse was 80 beats/min, the manual blood pressure was 110/80 mm Hg, the respiratory rate was 16 breaths/min, and the oxygen saturation was 98 %. On pelvic examination, the site of the bullet penetration was evident (Fig. 1), and a foreign body in the clitoris was palpable (Fig. 2). A computed tomography (CT)
scan of the pelvis and abdominal were performed and revealed an image consistent with a metallic foreign body (Fig. 3). Examination of other parts of the body was unremarkable. In the operating room; after administration of local anesthesia, the bullet was accessed and removed from the clitoris. No complications were observed following the surgical removal of the bullet (Fig. 4 and Video 1). The patient was discharged home on postoperative day 1 in good condition. In her follow-up examination after seven days and a month, the patient was asymptomatic without any complications.

3. Discussion

Non-obstetric vulva trauma is an extremely rare occurrence. Typically, the cause of non-obstetric vulvar trauma includes sports-related injuries, straddle injuries, midline splitting injuries, crush injuries, penetrating injuries (such as gunshot wounds), burns, animal/human bites, and sexual assault; Overall, a gunshot is typically seen in battle-field trauma or in large urban areas with criminal implications [1,7]. The severity of gunshot wounds is determined by the amount of kinetic energy transferred by the bullet, directly proportional to the mass and velocity. To the best of our knowledge, this case is unique due to the bullet being retained in the clitoris. A thorough assessment includes a detailed history, and physical examination and examination of imaging are most important in the evaluation of a metallic foreign body [3]. The patient had complained while seated in her living room, a bullet entered through the roof and landed on her vulvar region. On pelvic examination, the bullet was estimated $2 \times 0.8 \times 0.8$ cm in size, the site of the bullet penetration was evident, and a foreign body in the clitoris was palpable. Radiological imaging such as ultrasound or computed tomography (CT) scan might be confirmed helpfully. Imaging modalities may help to determine the exact location of the metallic foreign body, the depth of tissue infiltration, the tissue plane, and finally, the planning of surgical excision. CT imaging shows a well-defined hyper-dense metallic foreign body [3]. The treatment of the foreign body is mostly surgical removal. The surgical approach depends on the foreign body's size and location. A complete surgical method is usually achieved [4,5].
Under local anesthesia, this patient underwent complete surgical removal of the metallic foreign body. During surgical excision, care should be taken not to damage the urethra and other pelvic issues. The patient was evaluated one month after surgery, and the patient was asymptomatic without any complications.

4. Conclusion

Vulvar penetrating trauma is a rare condition. To the best of our knowledge, this is the first reported case of a retained bullet injury penetrating the vulvar area with a retained bullet lodged in the clitoris. In our case, we thought it to be rare and interesting, considering its occurrence. Although there is a rare case, we performed principles of management per standard rules for vulvar bullet injury. Under local anesthesia, this patient underwent complete surgical removal of the metallic foreign body.

Surgery was performed by Dr Adil Barut, Obstetrics and Gynecology specialist at Somali-Mogadishu Recep Tayyip Erdogan Research and Training Hospital, Mogadishu, Somalia.

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Consent

Written patient consent was obtained from the patient for publication of this case report.

Ethical approval

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Surgical and medical practices: Adil Barut, M.D.
Concept: Adil Barut, Cihan Çelik, M.D.
Design: Adil Barut, M.D.
Literature search: Adil Barut, Cihan Çelik M.D.
Writing: Adil Barut, Zeina Ahmed Hirsi, Hodan Abdi Hassan, M.D.

Declaration of competing interest

None.

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