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| Access this article online |
| Quick Response Code: |
|  |
| Website: www.jmwan.org |
| DOI: 10.4103/jmwa.jmwa_1_22 |

Extensive Coital Laceration at a Sexual Debut in a Teenager Presenting at the John F. Kennedy Maternity Center, Liberia

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Abstract:

We report a case of extensive coital laceration of the posterior vaginal fornix, extending to the lateral wall of the vagina in an 18-year-old at coitarche. The patient presented at the emergency department about 10 h after the coital trauma, via a verbal referral from a community health facility where a suspicion of criminal abortion was made, without examination. The patient was concerned about the coital laceration being publicly disclosed, and this resulted in her initial reluctance to divulge information about the incidence. The history at presentation was vaginal bleeding and lower abdominal pains following coital trauma by her boyfriend. Her haemoglobin was 6 g/dl, and shock index was 1.8. She was resuscitated with intravenous fluids and transfused with 3 units of whole blood. Vaginal examination revealed a 4–5 cm posterior fornix laceration which was repaired with vicryl-1 in the theatre. The patient was offered emergency contraception with levonorgestrel and placed on post-exposure prophylaxis against human immunodeficiency virus. She was discharged home on the 3rd day with haemoglobin of 9.5 g/dl after counselling. The need to establish trust, confidentiality and a high index of suspicion by healthcare providers especially in young persons with coital injury cannot be overstated as this will facilitate early diagnosis and reduce complications.

Keywords:

Coital laceration, coitarche, consensual sex, genital tract injury, non-obstetric trauma

Introduction

Coital laceration accounts for about 32% of non-obstetric traumatic injury to the female genitalia.^[1,2] This case highlights genital laceration at coitarche with haemorrhagic shock due to delay in the disclosure of coital history.

Case Report

Ethical approval was obtained from the institutional research board of John F. Kennedy Maternity Center (JFKMC): #2021/09/JFK0033.

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This case report involved an 18-year-old teenager. She presented at the emergency department of JFKMC, after initially presenting at a community health facility in which no vaginal examination was done. She was rather verbally referred to a second health facility in which initial suspicion of criminal abortion was made after vaginal examination, with a 10-hour history of lower abdominal pain and vaginal bleeding.

The patient refused to respond to questions in the presence of her mom and aunt until she was interviewed alone and after an initial resuscitation. She disclosed that the sudden vaginal bleeding started after consensual sexual intercourse with a 20-year-old

How to cite this article: Anandani-Lalwani T, Odunvbun WO, Johnson BC, Urey DG. Extensive coital laceration at a sexual debut in a teenager presenting at the John F. Kennedy Maternity Center, Liberia. *J Med Womens Assoc Niger* 2022;7:26-8.

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Submitted: 26-Jan-2022

Revised: 25-May-2022

Accepted: 01-Jul-2022

Published: 25-Aug-2022

friend, who was her senior in school. The sexual episode took place in her boyfriend's house. This was her first sexual experience. She admitted that her partner was very aggressive, and he had the smell of alcohol in his breath. Since it was her first sexual experience, she could not confirm a penovaginal disproportion. He did not use any condom. Soon after the sexual act, she started experiencing vaginal bleeding with clots. Her boyfriend was frightened and fled. There was associated lower abdominal pain. After the incidence, she went home and refused to disclose her vaginal bleeding to her parents.

The vaginal bleeding persisted, and she used several sanitary pads that were soaked with blood. She progressively became weak and developed dizzy spells. She suddenly collapsed in the house, 6 h after onset of bleeding. She was rushed to a community clinic headed by a nurse, who did not examine the patient before verbal referral to another health facility. An impression of hypovolaemic shock from induced abortion was made after examination in the second health facility. She was then referred to JFKMC, about 10 h after the coital trauma, and 4 h after presenting at the first clinic.

The patient was in her 6th grade in school, living with her parents.

She was conscious but weak and in painful distress. The patient was afebrile to touch. Her pulse rate was 129 b/min, and blood pressure was 71/38 mmHg. Haemoglobin was 6 g/dl. The serum human chorionic gonadotropin for pregnancy test was negative. Her shock index was 1.8. The abdomen was full, soft, and moved with respiration. There was mild-to-moderate suprapubic tenderness. Bowel sound was normoactive. Simultaneous resuscitation and evaluation were initiated. She was given 1 L normal saline bolus stat. She had blood-smear vulva with minimal bruises. The hymen was broken. There was no active vaginal bleeding. Speculum examination revealed extensive laceration at the posterior fornix extending to the left lateral fornix, about 4–5 cm in length [Figure 1].

Urgent point-of-care ultrasound scan revealed normal-sized nongravid uterus with normal adnexae. There was no demonstrable haemoperitoneum or pelvic organ involvement. A diagnosis of haemorrhagic shock secondary to coital vaginal wall laceration in a teenager was made.

Informed consent for repair of genital laceration in theatre was obtained from her mother. She was given 2 g of ceftriaxone intravenous and started on blood transfusion in the theatre before the vaginal wall repair. Vaginal examination under anaesthesia revealed posterior fornix laceration, about 3–4 cm from the



Figure 1: Coital laceration of the posterior fornix extending to the lateral vaginal wall

external cervical os, and extending to the left lateral vaginal wall. The laceration was repaired with vicryl 1.0 [Figure 2].

She was placed on amoxiclavulanic acid 625 mg twice daily for 5 days and flagyl 400 mg tid for 5 days. She received a total of 3 units of blood. The patient was placed on emergency contraceptive with levonorgestrel. She was counselled in the presence of her mother to ensure drug compliance, to reduce the risk of unwanted pregnancy and infection. The patient's retroviral status was negative. She was subsequently commenced on post-exposure prophylaxis against retroviral infection, based on the fact that the retroviral status of her male partner was unknown, and he could not be reached after the incidence. Her day 2 haemoglobin was 9.5 g/dl. She was discharged home by the 3rd day of admission after contraceptive counselling, on oral antibiotics, analgesics and haematinics. The patient was given an appointment of 1 week for the gynaecological clinic. Her repeat haemoglobin was 10g/dl. She was subsequently seen a month later, at which time her menstruation had resumed, and she had resumed school. After counselling on safer sex, she was referred to the family planning unit for contraceptive counselling and uptake.

Discussion

The reported case was an extensive traumatic injury at coitarche with resultant haemorrhagic shock. Injuries to the genital tract during consensual sex ranges from minor, requiring no repair to more extensive ones, with severe bleeding, which could lead to haemorrhagic shock and death where there are delays and poor management.^[3] Peritoneal and bowel involvement with peritonitis and bowel evisceration have also been reported.^[3] In a reported case that involved a post-menopausal woman who had coital laceration extending to the vaginal vault

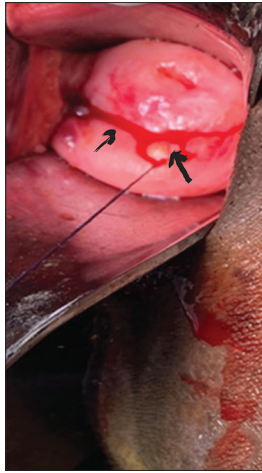


Figure 2: Repaired vaginal laceration, exposed with vaginal specula

during consensual sex, there was a prolapse of loops of bowel through the vault.^[4] This was probably as a result of the hypoestrogenic-induced thin vaginal wall. Our patient, despite the extent of the laceration, had no bowel or peritoneal complications, probably due to the thickness of her vaginal wall as a result of her age and hormonal status.

The common predisposing factors to coital injuries include rough sex, penovaginal disproportions, postmenopausal vaginal atrophy, congenital and acquired shortness of vagina and inadequate emotional and physical preparation of women for sexual intercourse.^[5-7] Inadequate foreplay and seeming aggression under the influence of alcohol during the sexual act would have contributed to the extent of the laceration in this case, as there was no obvious history of penovaginal disproportion.

Delay in disclosure of coital trauma may result in life-threatening complications and possible death if not adequately managed.^[3] Our patient was a teenager and a virgin who had just lost her virginity during a consensual sex. Divulging this information was difficult for her for fear of publicity and stigmatisation. At the community health facility from where she was initially referred, a suspicion of criminal abortion was made, resulting in 10 h delay and resultant haemorrhagic shock, before arriving at JFKMC. Prompt resuscitative measures,

including blood transfusion, repair of laceration, administration of antibiotics, institution of post-exposure prophylaxis against HIV and contraceptive measures, ensured satisfactory outcome of our patient.

Conclusion

A high index of suspicion, confidentiality and trust is needed in cases of coital injuries, especially involving young persons. This will facilitate timely disclosure, diagnosis and treatment.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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