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Original Article

A Decade of Coital Laceration Managed at a Tertiary Health Facility In Ibadan, Nigeria

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ABSTRACT

Background: Coital lacerations could either be associated with normal or forced sexual intercourse and may perhaps resolve with minimal treatment or could be deeper and more extensive resulting in significant vaginal bleeding. This study evaluated the clinical features, risk factors, treatment, and outcome of coital laceration in Ibadan, Nigeria. **Materials and Methods**: A retrospective review of cases of coital laceration managed at the gynecology emergency unit of the University College Hospital, Ibadan over a ten year period. Information on risk factors, injury characteristics, examination findings, treatment and outcome were retrieved with a proforma. Analysis was done using SPSS version 20.0. **Results**: Twenty-two cases were analyzed. Their mean age was 25.2 years and over a third (36.4%) sustained the injury at sexual debut but majority (63.6%) of them had consensual sex. All, the patients presented with bleeding per vaginam with majority of the lesions at the posterior fornix (68.5%) and lateral vaginal wall (9.1%) while 22.7% of them had multiple vaginal lacerations. Almost all (92.3%) the patients had suturing of the laceration and 72.7% were admitted in the hospital. **Conclusions**: Coital lacerations following consensual sex is more common in nulliparous women with no previous sexual experience. Simple suturing is the commonest treatment modalities. **Keywords**: Coital laceration, consensual sex, posterior fornix, Ibadan

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Introduction

Coital lacerations/injuries are often mild but could also be life threatening.[1-3] Coital lacerations account for significant morbidity among sexually active women.[4] Cases result from rough and hurried coitus leading to functional peno-vaginal disproportion, however in clinical practice, lacerations due to consensual sex are more

commonly encountered.[3,5] Although rarely reported, consensual intercourse could also result in an extensive rectovaginal tear or rectovaginal fistula.[6,7]

In Nigeria, the incidence of coital lacerations ranges from 0.34% to 0.7%.[2,8] An incidence of 0.55% was reported in Ghana.[9] However, the true incidence of coital injury is difficult to ascertain especially because of non-disclosure arising from fear of stigmatization.[9,10]

Several factors with coital lacerations include rape, nulliparity, first sexual intercourse, prolonged abstinence, sex positions such as dorsal position, rough coitus, peno-vaginal disproportion, use of aphrodisiacs as vaginal lubricant, inadequate emotional and physical preparation of women for sexual intercourse (foreplay), pregnancy, puerperium, postmenopausal vaginal atrophy, congenital and acquired shortness of the vagina.[3,8,11-13] Of these, studies have reported rape and nulliparity as the commonest risk factors.[11,13]

Coital lacerations may involve single or multiple sites.[11] The common site of occurrence is the right side of the posterior fornix and the vagina vault and the clitoris could also be involved.[6,14] The laceration could result in diverse complications such as hemorrhage, injury to abdomino-pelvic organs, sepsis, vaginal stenosis, recto-vaginal fistula, vesico-vaginal fistula and even death.[4] It is important to note that various presentations of coital injuries require careful evaluation, correct diagnosis and management for a successful outcome with minimal morbidity.[1,10,15]

There is dearth of studies regarding coital laceration in Nigeria. This study will therefore identify the risk factors, pattern of presentation, treatment modalities and outcome of coital lacerations at the University College Hospital, Ibadan, Nigeria.

Materials and Methods

A retrospective review of all cases of coital laceration that presented in the gynecology emergency unit of the University College Hospital, Ibadan, Nigeria over a ten-year period (January 2010 to December 2019). Information of patients who presented with genital injury or vaginal bleeding following genital trauma during the study period was retrieved from the gynecology emergency register. Their medical records were retrieved from the medical records department. Inclusion criteria were those with genital injury following sexual intercourse while patients who presented with bleeding per vaginam from lacerations following vaginal delivery or with repair of episiotomy within two weeks postpartum were excluded. A proforma was used to retrieve information regarding demographic characteristics, obstetric history, pattern of presentation, clinical findings at vaginal examination, etiologic/risk factors, treatment modalities, and outcome.

For the purpose of this study, the perception of consensus of sexual intercourse was considered based on patient's statement as documented in the case note. Presentation at gynecology emergency unit was defined as early when patient present within 12 hours of onset of symptoms but as late if more than 12 hours. Prolonged sexual abstinence was absence of sexual intercourse in the woman of six months and above. Data was entered and analyzed using SPSS version 20.

Results

During the period of review, a total of 25 patients presented with coital laceration of which 22 met the study criteria while the remaining three had history of vaginal delivery within two weeks of presentation of which two had episiotomy repair following delivery.

The mean age was 25.2 years and half of them were between 20-29 age categories. Equal number (50%) of the study population was married and single respectively. They were mainly (59.1%) nulliparous women with a higher proportion having tertiary level of education and only 9.1% had no formal education (Table 1).

Some of the patients had multiple clinical presentations but all of them presented with bleeding per vaginal. Vaginal laceration (59.1%), vulvo-vagina hematoma (40.9%) and lower abdominal pain (22.7%) were the commonest presentation. More than half (54.5%) of them

presented within 5-12 hours after the onset of symptoms or the implicated sexual intercourse however, only one patient (4.5%) presented after 24 hours. The lesion involved mostly the posterior fornix (68.5%) with less than a quarter (22.7%) having multiple sites vaginal lacerations and the length of laceration ranging from 3-4cm (40.9%) and over 4cm (40.9%), (Table 2).

Coital laceration occurred in sexual intercourse with casual consort in 40.9% of the study population while it was with the husband in 30.4% of the cases. Majority (63.6%) had consensual sex and 36.4% resulted from sexual assault. About 36.4% of the coital laceration occurred at coitarche and absent of foreplay was noted in almost half (45.5%) of the study population (Table 3).

Most of the lacerations (92.3%) were repaired under anesthesia. The hospital admission rate was 72.7%, though duration of stay was less than 24 hours in majority (68.8%) of those that were admitted. The identified predisposing circumstances to coital laceration were coitarche (36.4%), prolonged sexual abstinence (28.6%) and peno-vaginal disproportion (22.7%), (Table 4).

Post treatment complications include bleeding per vagina post repair, genital pain and shock in 18.2% of the women respectively and anemia was observed in 9.1% (Table 5).

Table 1: Study Participants' characteristics

Variables	Frequency	Percent
Age (years)		
<10	2	9.1
10-19	3	13.6
20-29	11	50.0
≥30	6	27.3
Parity		
0	13	59.1
1	4	18.2
2	2	9.1
3	1	4.5
≥4	2	9.1
Marital status		
Married	11	50.0
Single	11	50.0
Educational status		
None	2	9.1
Primary	6	27.3
Secondary	5	22.7
Tertiary	9	40.9

Table 2: Clinical presentation and Site of injury

	Variables	Frequency	Percent
Clinical presentation	Bleeding PV	22	100.0
	Laceration	13	59.1
	Abdominal pain	5	22.7
	Bruises	2	9.1
	Vulvo vagina hematoma	9	40.9
	Hypovolaemic shock	2	9.1
	Duration of laceration before presentation (hour)		
	<1	4	18.1
	1-4	2	9.1
	5-12	12	54.5
	13-24	3	13.6
	>24	1	4.5
Site of injury	Posterior fornix/upper vagina	15	68.5
	Lateral wall	2	9.1
	Multiple sites	5	22.7
Size of tear (cm)	1-2	4	18.1
	3-4	9	40.9
	>4	9	40.9

PV - per vaginam

Table 3: Coital peculiarities of Study participants

Variables	Frequency	Percent
First sexual intercourse		
Yes	8	36.4
No	14	63.6
Causes		
Sexual assault	8	36.4
Consensual sex	14	63.6
Foreplay		
Present	12	54.5
Absent	10	45.5
Partner		
Boyfriend	5	22.7
Casual consort	9	40.9
Husband	8	36.4

Table 4: Risk factors and treatment modalities

	Variables	Frequency	Percent
Risk factors	Coitarche	8	36.4
	Recently returned spouse	1	4.5
	Abnormal sex position	1	4.5
	Vaginal Stenosis	1	4.5
	Peno-vaginal disproportion	5	22.7
	Duration of sexual abstinence(month)**		
	<6	10	71.4
	≥6	4	28.6
	Previous vaginal surgery	1	4.5
	Post Hysterectomy	1	4.5
Treatment modalities	Repair under anaesthesia	21	92.3
	Vaginal pack	1	1.4
	Blood transfusion	3	13.6
	Hospital admission	16	72.7
	Duration of stay(hours)*		
	<24	11	68.8
	24-48	3	13.6
	>48	2	9.1

*n=16, **n=14

Table 5: Complications

Variables	Frequency	Percent
Bleeding PV post repair	4	18.2
Genital pain	4	18.2
Anemia	2	9.1
Shock	4	18.2

PV - per vaginam

Discussion

This was a retrospective review of 22 patients who were managed for coital laceration over a ten year period. Non-obstetric vaginal lacerations related to coitus have been reported to be as high as 33% and account for 1 in 1,000 cases of gynecologic emergencies in some health institutions but the true incidence cannot be ascertained due to under-reporting in our environment.[11,16,17] Most studies have reported coital lacerations more frequently among teenagers or young unmarried woman especially during their first sexual experience but women at any age even in the post-menopausal period could sustain the injury.[2,8,17] In our study, the mean age of the women was 25.2 years which is similar to a Cameroonian study where a mean age

of 25.6 years was reported.[17] Similarly, several studies have documented coital laceration occurring more at the time of coitarche as observed in our study.[8,17]

Coital laceration occurred in consensual sex along with some associated risk factors like nulliparity, peno-vaginal disproportion, and absence of foreplay in the present study. These identified risk factors corroborate the findings obtained in several studies.[1,9,18] Though some other studies reported rape, inadequate foreplay, sexual intercourse inexperience, low educational level, dextrorotation and retroversion of the uterus as risk factors.[2,4,5,19]

Additionally, consensual sex has been a recurrent finding in most studies but not identified as a risk factor for coital laceration.[2,11,20,21] Some studies have also documented difference in the pattern of vaginal injuries sustained based on if the coitus was consensual or non-consensual and the positioning during coitus.[5,22] Similar to previous findings, the laceration occurred mainly in the posterior fornix in our study.[5,14,17,23,24] However, contrary to our findings, a study in Abakaliki, Nigeria reported coital laceration majorly involving the hymen, though their study population were among adolescent.[13] The laceration involving more of the posterior fornix might be because the upper region of the vagina consists of bundles of connective tissue which are unsupported, coupled with its vulnerability since it can extremely distend during sexual intercourse.[23]

More than half of the patients presented early which resulted in prompt and successful management. Early presentation at the health facility by majority of them showed good health seeking behavior which could be attributed to their high level of education. This finding is in congruence with several studies that have shown good health seeking behavior among women with higher level of education.[25-27] Although, despite their high level of education they lack adequate counseling and are inexperienced since there was no foreplay among several of them. This reveals the need for sex education to be included in our school curriculum.

The coital lacerations were majorly repaired under anesthesia while only three of the patients needed to be transfused with blood because most of the patients presented early. Genital pain, bleeding per vaginal post-repair and shock were the commonest complication in this study. This agreed with findings by Manohar and Kavyashree,[28] and Nweke et al.[13] The patients were closely monitored, and the average duration of hospital stay was less than 24 hours. Though, an average duration of two,[1] three[19] and five days[10] were observed in other studies.

The findings of our present study can serve as foundation for future prospective studies which should explore the long term psychological and sexual impacts of coital laceration among adolescence and unmarried women who could have been badly traumatized by the experience.

Conclusion

Coital lacerations following consensual sex is more common in nulliparous women with no previous sexual experience. It could be life threatening with profuse bleeding leading to hemorrhagic shock requiring blood transfusion. Therefore, early presentation and prompt management will prevent case morbidity and fatality. There is need for first timers to have adequate sex education and be counseled in respect to importance of foreplay while their partner should be advised to be tender instead of vigorous penile thrusting.

Conflict of interest:
Authors declare no conflict of interest

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