COITAL INJURIES: A STUDY OF THREE CASES

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SUMMARY

This study reviews experiences in the management of three cases of lacerations of the vagina following coitus. A brief review of the recent literature is made. Although the extent of injuries can be very variable, the principles of management consist of prompt resuscitation and arrest of haemorrhage, appropriate surgical repair under general anaesthesia, and systemic or local antibiotic therapy to combat infection. Avoidance of vigorous or abnormal coital practices, especially in single women, in the immediate postpartum period, and in postmenopausal women, can help to reduce the frequency and severity of such injuries.

INTRODUCTION

Minor injuries of the vulva and vagina during defloration can occur, but rarely call for medical attention. However, severe coital injuries of the vagina may occasionally occur. In 1899 Neugabauer reported on more than 150 cases of coital injuries gathered from literature.[1] Diddle[2] and Rahm[3] have reported deaths from haemorrhage and sepsis, arising from coital injuries. The true incidence is quite difficult to assess, as many of the accidents are not usually reported and many others may pass unrecognised.

It is very possible that some women will offer incomplete histories of the events, leading to trauma to the vulva or vagina due to vigorous sexual activity. In such situations, the gynaecologist has to make appropriate presumptions, and be prepared to treat the injury, despite an apparently negative or even misleading history.

This report reviews the experiences in management in full, of three cases of coital injuries that were seen in the Obstetrics and Gynaecology Unit, University Hospital during the year 1982. The possible aetiology, predisposing causes and management of coital injuries are presented and discussed.

Case 1

Mrs. P., a 31-year-old married Indian was admitted to the University Hospital with the complaint of severe bleeding per vagina. Although she 'denied' any sexual intercourse, the husband gave the following history.

They were married on the day before admission and stayed in a hotel for their honeymoon. The wife was very apprehensive about having sexual intercourse but with persuasion from her husband, the marriage was consummated at around midnight.

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The wife experienced severe deep dyspareunia associated with vaginal bleeding and the couple noted that the bedsheets were soaked with blood. At about 0500 hours, the patient had a recurrence of heavy vaginal bleeding with much clots. The patient went to the toilet to cleanse herself, when she felt dizzy, and fell on the floor sustaining a laceration over the forehead. The hotel doctor was called in, and she was then referred to University Hospital for further management. She was in a state of shock, with pallor and cold extremities. Her pulse was 130/minute and thready. Her blood pressure was 80/30mmHg. She had a laceration of 3 cm in length over her forehead. Her abdomen was soft with no tenderness or guarding, and no masses were palpable.

Vaginal examination showed that there were no lacerations in the vulva and the hymen was not intact. There were blood clots in the vaginal canal. Since the patient felt very tender when one finger was introduced per vaginum, further examination was deferred. A provisional diagnosis of shock due to vaginal injury and bleeding was made. She was immediately resuscitated with intravenous infusion of a litre of blood and two pints of haemocel. Her haemoglobin was 8.6 g/100 ml. The skull x-rays showed no fractures.

Examination under anaesthesia was carried out. 300 mls of blood clots were evacuated from the vaginal canal. There was a H-shaped laceration along the right lateral and anterior vaginal walls, and a small irregular tear on the posterior vaginal wall, near the posterior fornix. Profuse bleeding from the lacerations were noted. The lacerations were repaired with atraumatic catgut sutures. The forehead laceration was sutured with interrupted silk sutures. Her post-operative recovery was unremarkable. She was then discharged, two days later. At follow up clinic, six weeks later, vaginal examination revealed that the lacerations were well healed.

Case 2

Miss A.M., a 20-year-old single Malay girl was admitted near midnight for the 'alleged' complaint of bleeding per vaginam after a 'fall', landing on her perineum, on the bathroom floor. She had heavy blood flow per vaginam with clots for the past two hours. She also had associated fainting attacks. She 'denied' sexual intercourse. Her last menstrual period was five days ago, lasting three days; and her periods had always remained normal.

On further and deeper questioning, she admitted that she had sexual intercourse with her fiance on the previous day, but had minimal bleeding then. She had refused 'sex' initially. She experienced deep dyspareunia. The following morning she noted slight bleeding per vaginam. She did not seek medical aid until the evening, when she noticed heavy vaginal bleeding.

On examination, she was pale, anxious and depressed. Her pulse was 100/minute and blood pressure was 100/50 mmHg. Her abdomen was soft but slightly guarded. No masses were palpable. Vaginal examination showed that there were no vulval or perineal injuries. The vagina was distended by clots.

On examination under anaesthesia, about 300 mls of blood clots were evacuated from the vaginal canal. There was a transverse laceration across the posterior fornix about 4 cm in length. The laceration was repaired with continuous atraumatic catgut sutures and haemostasis was ascertained. She was discharged well two days later.

Case 3

Miss. R.H., a 27-year-old single Malay marketing executive was admitted to hospital with a complaint of vaginal bleeding with clots. She denied sexual intercourse initially, but after further questioning, she agreed that she had her first sexual intercourse experience just prior to admission. There was dyspareunia. On examination her general condition was good. Pulse and blood pressure were normal.

Vaginal examination showed few small lacerations over the lateral vaginal walls, but no active bleeding was seen. She was admitted for observation. There was no further vaginal bleeding, and she was then discharged the next day.

DISCUSSION

Sexual intercourse was 'initially' denied in all these three cases. Details pertaining to the use of foreign bodies, unusual coital positions, overwhelming excitement and activities during sexual intercourse were all not elicited from the patients or from their partners.

There was some delay in seeking medical assistance due to the fear of 'social 'embarrassment and ridicule. The first two cases were admitted in a state of 'shock'.

A constant presenting symptom was vaginal bleeding after coitus. The patients also complained of dyspareunia and lower abdominal pains.

Predisposing factors and aetiology

Wilson *et al.*,[4] found that only in six out of their 37 patients did the injuries occur at first sexual intercourse. The other patients had had cohabited several times previously with their partners.

Injuries of the vagina may be associated with a number of predisposing conditions, such as congenital anomalies (e.g. a vaginal septum may be torn); a vagina shortened by hysterectomy; postmenopausal atrophy; post-radiation vaginal atrophy and rigidity[5,6] and to early resumption of coitus after episiotomy or other vaginal surgery, before surgical healing is complete.

Use of foreign bodies inserted for sexual stimulation (e.g. rigid artificial phallus), also can cause vaginal lacerations. Fortunately, this is presently uncommon in our Malaysian society.

In postmenopausal women, vaginal injuries are more common because the vagina can be thin, devitalised, foreshortened and can have diminished vascularity.

Van de Velde[7] postulated that 'disproportion' between the male and female genitalia, roughness and violent thrusts of the penis during sexual intercourse were important contributory factors towards lacerations in the vagina during coitus. Such 'genital disproportions' are noted in prepubertal, postmenopausal and post-hysterectomy cases. Rahm[3] suggested that the damage was produced by spasm of the muscles of the vaginal canal, causing the canal to be shortened and narrowed. He also thought the injury might have been related to particular coital postures e.g. rear entry, dorsal decubitus with hyperflexion of thighs, standing position, sitting position). In this study, Mrs P. had multiple lacerations of the vagina, and the husband reluctantly admitted that they had adopted an unusual coital posture.

Vaginal injuries from coitus tend to be more severe in the group of patients who were under the influence of alcohol.[4]

Sites of injury

Vaginal lacerations may be single or multiple. In patients with severe multiple lacerations, the possibility of the insertion of foreign bodies made from glass, metal and wood, and that of unusual sexual practices should be considered. Antero-posterior and lateral x-rays of the pelvis, can sometimes help to localise the site of these foreign bodies.[5,8]

It has been reported that the vaginal tears were located most frequently in the posterior and lateral walls and in the vault of the vagina, often in the right rather than the left lateral wall[1,2,9]. Out of 37 cases, 25 cases involved the vault of the vagina, whereas twelve cases were found to be in the posterior wall and seven cases were in the right lateral wall of the vagina.[4]

Hall *et al.*,[10] and Tabriskey *et al.*,[11] reported a case of vaginal vault laceration per se with evisceration of the bowel during coitus, approximately two months after an uncomplicated vaginal hysterectomy. Apesos *et al.*,[12] reported the first case of post coital pneumoperitoneum, occurring two months after abdominal hysterectomy.

Mechanism of injury

The mechanism of vaginal tears in the posterior fornix and vault might be due to the fact that, during

coitus, the lower third of vagina contracts, whilst the upper two thirds expands and lengthens, and the uterus rises ventrally, thereby exposing this area to direct trauma.[13] As a result, tears in the posterior vaginal fornices are more common.

The right fornix is usually longer than the left and therefore is more likely to accomodate the glans penis and be stretched by it, and hence less likely to sustain injury.[14]

The third possible reason for the more common occurrence of posterior fornix tears is that it has much poorer fascial supports, as compared to the anterior fornix.

Management

The management of vaginal lacerations is standard, once the diagnosis is established. Irritant materials like massage cream and foreign bodies should be removed immediately, if they had been used. The inflammation is treated with anti-bacterial chemotherapeutic agents, locally and systemically.

In the postmenopausal estrogen deficient vagina, the local application of oestrogen creams will improve the vaginal flexibility and tend to reduce the incidence of coital injuries.

The definitive treatment of overt vaginal lacerations, is a primary surgical repair under general anaesthesia. In patients with minor and superficial vaginal bruising, haemostasis may be secured by firmly packing the vaginal canal. Blood replacement may be necessary. Systemic antibiotics are given when there is a likelihood of infection, or there is already the presence of overt infection.

In the first two cases reviewed, immediate blood transfusion and resuscitation followed by primary surgical repair under general anaesthesia resulted in good resolution of the injuries.

The principles of management of vaginal vault rupture, with or without bowel evisceration, is prompt surgical intervention under general anaesthesia, either by the abdominal or the vaginal route, depending upon the extent of the pathology and upon the need for bowel resection. Proper toilet, debridement and antibiotic cover would be imperative.

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