

GENITAL TRACT INJURIES

by

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Injuries of the genital tract following coitus have been widely reported in literature. From January 1962 to March 1967 (63 months), in S. S. G. Hospital, Baroda, there were 24 cases of genital tract injuries due to varied aetiological factors. During the said period there were 4799 indoor admissions in gynaecological wards. Thus the incidence of these injuries requiring hospital treatment was 0.16 per cent. It is, therefore, considered that study of these cases could bring forth many interesting features and their management.

Analysis of the cases

The ages varied from 8 years to 41 years. The majority of the cases were 21 to 30 years of age. There were 4 cases above the age of 40 years. The marital status revealed that 6 were unmarried and 18 were married. Of the married women, 1 was a nullipara and 17 were multiparae.

The aetiological factors of these cases are shown in table 1. The most common aetiological factor in 3 un-

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TABLE I
Nature of trauma

	Unmarried	Married
Accidental fall	3	11
Cow or bull horn	1	5
Coital injury	-	2
Following rape	2	-
Total	6	18

married and 11 married women was an accidental fall in abducted position of the thighs or a straddlewise injury. The next common aetiological factor was an injury directly produced by a horn of cow or bull, in 6 cases. Coital trauma following rape and usual intercourse was seen in 4 cases.

TABLE II
Sites of injury

	Unmarried	Married
Vulva	4	8
Vaginal walls and fornices	2	14
Urethral avulsion	-	2
Perineum	4	2
Miscellaneous	-	1

The various sites of injury (following varied aetiological factors) are shown in table 2. The impact of

direct accidental trauma was on the vulva in 12 cases. The vulval injuries were in the form of haematomas of different sizes, abrasions, contusions, and contused lacerated wounds of $\frac{3}{4}$ " to 2" in length.

In 16 cases the vaginal walls were the sites of injury. These injuries consisted of lacerations and contused lacerated wounds of 1" to 3" in length. In cases of cow horn injury the direction of the tear was longitudinal. In cases of rape also it was longitudinal. But in multiparae following usual intercourse the tear was in transverse direction and nearer the posterior fornix.

The urethra showed avulsion and tear in 2 cases. The perineal injury in 4 cases simulated a first degree perineal tear and in 2 cases a second degree perineal tear. In addition, a few of these cases had haematoma and abrasions. One of the vulval injury cases had fracture of right pubic ramus.

All these cases presented as excessive vaginal bleeding. Four cases showed presence of peripheral shock as an additional finding. One of these cases came for vulval swelling.

Primary suturing was done in 18 cases, Vaginal packing in 2 cases, self retaining catheter and suturing in 2 cases, and in the remaining 2 cases just observation was continued. The last 2 cases were, one of vulval haematoma, and the other was a case of urethral avulsion. The case having avulsion died due to profuse bleeding. She was 23 years old and had 3 normal deliveries. She was 8 months' pregnant and had accidental fall from a staircase few hours before admission. On examination her

pulse was not recordable; blood pressure 60 mm Hg; urine was blood stained. Abdominal examination revealed uterus of $7\frac{1}{2}$ months' size; foetal heart sounds not recordable. Presenting part was vertex 2, and floating. On speculum examination there was complete longitudinal tear of the anterior vaginal wall avulsing the urethra, and urethral opening was not visualised.

Her bleeding time was 4 minutes and 30 seconds and clotting time was 3 minutes and 16 seconds.

The condition of the patient did not permit any other mode of management except vaginal packing and blood transfusion. The patient expired two hours after admission. With this death, the mortality of the series in relation to cases treated is 4.1 per cent.

Discussion

In literature, coital trauma has been shown as the most common precipitating factor of various types of genital tract injuries, Fish (1956), Premachandra (1964). In this series accidental trauma as a result of a fall, and a cow or bullock horn are the common aetiological factors in 20 cases. The resulting injuries after such varying traumatic factors also present varied features. One common feature of the accidental injuries was that their severity was mainly due to unawareness of the recipient at the time of injury. The protective reaction on the part of the recipient was lacking. Thus the accidental factor had an unopposed impact on the part of the recipient. This explanation is true for every accidental injury. The prevention of

such injuries would then largely depend on the greater awareness on the part of the recipient of such injuries. However minor is the accidental factor, these women have abnormal symptoms like vaginal bleeding, vulval pain and urinary symptoms and need a thorough gynaecological examination to rule out hidden genital tract injuries. If detected, institution of adequate treatment will assure prompt recovery.

The longitudinal direction of the vaginal tear in cases of cow or bull horn injuries indicates the commencement of the trauma from below inwards. Its final direction, whether anterior, or central or posterior, determines whether anterior vaginal wall with bladder or whether posterior fornix or posterior vaginal wall with rectum is injured respectively. Fortunately, no serious injuries to the bladder or bowel were encountered in this series. Perineum or posterior vaginal wall was the common site of this injury. The obliquity of the vaginal walls and longer length of the posterior vaginal wall are the likely factors in such types of injuries.

Of the 4 cases of coital trauma, 2 followed rape and the remaining 2 followed usual coitus. The mechanism of the vaginal tears following coitus is explained on the basis of least support of the vaginal vault and deeper penetration (Dickinson 1949). The site of such tears is the posterior fornix. One of our cases in addition had extension of the tear into the right fornix. Coital trauma of rape differs in producing vaginal tears. In both the cases the tear was longitudinal and extended along the lateral

vaginal wall nearer the right fornix. In these cases the victims were 8 and 14 years respectively. Forcible penetration against the will of a victim, and added stretch on the comparatively inadequately developed vagina in these young victims, initiates tearing from below upwards. The loss of blood and fear further complicate the onset of peripheral failure. One of these cases required resuscitation with blood transfusion prior to the primary suturing. In addition, these cases of rape should also have a smear and a swab to detect intracellular diplococci (gonococci). One of these rape cases had positive smear for gonococci. She was treated with streptomycin and penicillin, following suturing, for 5 days. The risk of masking syphilitic infection was avoided by doing Kahn test six weeks following discharge. It was negative. We feel that in cases of rape the above precautions are necessary not only from the medico-legal point of view but for the future well-being of these victims.

Purnell (1965), quoted three cases in elderly women having spontaneous rupture of the vaginal vault following an accidental fall. One of our cases aged 40 years had an accidental fall while carrying a bucket full of water. This resulted in a spontaneous tear of the posterior fornix without any marks of injury on the vulva. The atrophic vaginal walls in the elderly with weakened supports at the vault are the precipitating factors of such a tear. Additional factors like ballooning and stretching of the vaginal wall after accidental fall also contribute towards spontaneous rupture. In addi-

tion, tear involving the posterior pouch of the peritoneum and omentum was seen through it. Apart from primary suturing, use of antibiotics and further observation to rule out bowel injury are the additional measures required.

Summary

Twenty-four cases of genital injuries following their various precipitating factors were studied. The relationship of the aetiological factors with type of injury, site of injury, added risks, are described; special features of the management were blood transfusion, use of antibiotics, primary suturing and vaginal packing in a few cases.

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