

Unusual Scrotal Injury by Cycle Hand Brake - A Case Report

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ABSTRACT

Background: Scrotal injury with perforation is not often reported in forensic medicine since it has been a topic of discussion in urology, as it requires various measures in prevention and reconstruction of the damaged scrotal tissues. Injuries of the scrotum and its adjoining structure may lead to temporary or permanent impotence or infertility or both impotence and infertility in males. Among the various reasons of genital injuries, blunt trauma is the commonest, followed by injuries like animal bite and self-mutilation. Some of these injuries are not reported but this type of injury requires immediate attention and treatment to prevent long term psychological and sexual dysfunction. Under section 320 IPC (Indian Penal Code 1860), the first clause defines emasculation as a result of amputation, direct assault, nerve injury other injuries caused by accidents, violent sexual act etc. leading to sexual disability.

Case Report: Here is a case of accidental scrotal injury that led to the perforation of the scrotum. The perforation was by blunt force derived from the hand breaks of a cycle which penetrated to the root of the penis.

Conclusion: As far as this particular case is concerned the penetrating scrotal injury may lead to sexual impotence and long term male sex hormone imbalance which may affect the physical and sexual performance of the patient.

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► *Implication for health policy/practice/research/medical education:* Scrotal Injury by Cycle Hand Brake

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1. Introduction:

Injuries to the external genitalia are unusual reported and most often are caused by outdoor sport activity, violent sexual acts and many at times due to heavy machines and road traffic accidents. Injury to the scrotum may be penetrating or perforating where as the injuries of the

penis differ, it could be abrasion, bruises especially in sexual crimes. In circumcision a religious custom among certain communities, there is localized cut wound with bruises. Penile fracture and amputation is done under the influence of drugs or psychosomatic disorders (1).

The male external genital part is a mobile anatomical structure consisting of the penis and the scrotum with the testes. Injury to the penis or the scrotum is quite resistible due to the elastic nature of the

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skin and subcutaneous tissue. In most of the injuries, testes are spared because of the strong cremastic reflex as well as dartos muscles in the scrotum (2). But Injury to the penis and scrotum has been reported in a heavy machine accident due to the clothes getting entangled, which is commonly worn by the workers. It may be dhoti, lungi, trousers etc (3). Other common modes leading to direct trauma are riding a two wheeler, assault, gunshot and blast injuries, burn, animal bite, self mutilation and also vitreolage which has increased with time.

Here we present a case of accidental injury to the scrotum by cycle hand brake.

2. Case Report:

A young man was brought to the casualty of the J.N. Medical College in the evening at around 6:00 PM with the history of bleeding and pain in the external genitalia. He was immediately transferred to the emergency. Sexual assault or self-mutilation was suspected, therefore, a team from surgery as well as forensic was called to evaluate it.

As per the history patient narrated that he was riding a bicycle while returning home. A stone struck the front wheel of the cycle and he lost his balance and the cycle fell in the forward direction. He sustained injury in the inguinal region and some bruises and abrasion on the body especially the hands as he was thrown forward. The left hand brake was responsible to cause the injury to the inguinal region.

He realized that the whole of the brake penetrated to the root of the penis. Therefore the penis along with scrotum was perforated. The patient was unable to move due to the severity of pain. Assistance was provided by a passer-by who carefully removed the cycle break rod. After removal there was severe bleeding. The penis occupied the perforated opening of the scrotum.

Vital parameters of the patient were stable and all other systems were apparently normal. On local examination it was found that the whole of the penis was lying in the



Fig. 1. It shows cycle handles and hand brake.



Fig. 2. It shows penis penetrating through its root and coming out of perforated scrotum.



Fig. 3. It shows retracted penis with small laceration and perforated opening of scrotum.

perforated opening of the scrotum. It was also observed that both the testicles were spared from injury.

The patient was taken to the operation theatre and the penis was retracted out of

the scrotum. Scrotum was explored for the injury into the tunica albuginea for bleeders and tear. The testicles were excluded for haematocele. Other adjoining structures like epididymis and vas deferens were also found to be unhurt. Penis showed swelling, redness and laceration of about 1.5 centimetres in diameter in the mid ventral aspect. The shaft of the penis was not injured and there was no injury to tunica albuginea and the corpus cavernosum. Glans penis, foreskin and urethra were also spared.

The perforation of the scrotum was repaired and further course of the patient was uneventful. On follow up the patient did not complain of any discomfort during micturition or any deficiency in sexual activity.

4. Discussion:

Male genital injuries are most commonly caused by blunt force trauma 85% which involves direct blow by assault, sports injury and road traffic accident (4, 5). The remaining injuries are caused by penetrating wounds that may be gunshot, blast and penetrating sharp weapon and to a small extent by animal bite, self-mutilation and sexual assault (6). It has been found that to 83% of patients presenting with penetrating trauma to the scrotum or penis are associated with other injuries (7, 8). Therefore to prevent long term sexual or psychological damage, the injuries to male genital organ need immediate attention and proper management (6).

Earlier it has been reported that most of the injuries of the external genitalia in the developed countries were due to agricultural tools and machines (9) whereas in developing countries it was due road traffic accidents but now a days, it has shifted its focus on road traffic accidents and firearm injuries (10).

Self-injuries to the genitalia or self-mutilation of the male genital organ may be of psychotic in origin 87% or non-psychotic 13% (11); non psychotic is generally religiously motivated like

circumcision or incision of the prepuce (12, 13).

Self-mutilation of male external genitals, psychotic in origin may involve complete auto amputation of the penis or removal of the scrotum along with testes (11). The reason for self-amputation of the penis may be due to auto erotic activities and various drugs induced psychosis (1). Self-removal of testes is commonly done by a group of people before puberty; they are known as Hijras or the male prostitutes for earning their lively hood by sodomy.

Paraskevas *et al* reported a case in which penile skin was completely degloved and scrotal skin was partially avulsed, exposing corpora cavernosa and corpus spongiosum, by a thresher machine (14).

A proper approach involving a multidisciplinary team should be involved in treating such cases that may include debridement of the wound, decontamination and if needed reconstruction of the genitalia followed by grafting of the skin. Psychological trauma associated with any of the deformities that have been the outcome of the injuries should also be addressed in terms of multidisciplinary approaches.

In cases of severe testicular injury which do not allow reconstruction, testicular epididymal sperm extraction (TESE)-mapping, i.e. epididymal sperm aspiration, can be used, even on the ablated testicle (15).

As far as this particular case is concerned the penetrating scrotal injury may lead to sexual impotence and long term male sex hormone imbalance which may affect the physical and sexual performance of the patient. This is covered by Indian laws as emasculation (IPC 320 emasculation-clause I) that is grievous hurt a punishable offense. This law does not address the psychological trauma to the patient and also to the psychiatric evaluation and therapy required. A comprehensive approach is required.

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