PENILE AMPUTATION DUE TO IMPROVISED EXPLOSIVE DEVICE (IED) BLAST INJURY IN A PAKISTANI SOLDIER

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ABSTRACT

Penile amputation is a catastrophe and the goal should be to restore adequate mass, sensation and functionality of penis considering penile prosthesis where necessary. A case of a 25 year soldier who had penile amputation due to improvised explosive device blast injury is reported.

Keywords: Blast injuries, Improvised explosive devices, Neurosurgery, Penile amputation, Penile reconstruction, Rehabilitation, War on terror.

INTRODUCTION

For any person, loss or damage to limb or organ is a great bereavement. Loss of a body extremity is scientifically defined as amputation. Penile amputation is one such injury that is not just catastrophic but also has profound psychological, social and behavioral implications on the patient[1]. Penile amputation is quite uncommon[2]. Causes may include burns, motor vehicle and industrial machinery accidents, self-mutilation by psychiatric patients, animal bites, acts of violence, malignancy and congenital anomalies[3,4]. Discussion about penile amputation due to improvised explosive devices (IEDs) is limited[5]. Here, we report a rare case of penile amputation that resulted due to an IED blast.

CASE REPORT

A 25 year old recently married soldier was transferred from a peripheral hospital to our institute for prosthetic rehabilitation of his amputated left leg. Patient had sustained multiple injuries due to IED blast 10 months back during a search operation in war against terrorism. Patient had a transfemoral amputation on left side (figure-1) and multiple soft tissue injuries on right leg. Reconstructive surgery and skin grafting was carried out for loss of major portion of muscle mass from anterolateral and posterior tibial compartment of right leg. On initial interview, the patient looked quite depressed. When inquired further he told that he had lost major part of his penile shaft and was urinating through a sub-dorsal urethral fistula and had painful micturition and a poor stream.

On examination, the penile stump was 1 cm while scrotum and testes were unaffected. Patient was referred to urologist who performed urethroplasty and penile shaft reconstruction via two-staged Bracka's repair increasing the penile shaft length to 3 cm (figure-2) and micturition through urethra was restored. For limb amputation, he was provided a modular transfemoral prosthesis with polycentric knee joint and a multi-axial foot. He underwent regular psychotherapy sessions to alleviate depression.

On follow-up at 3 months post-discharge, the patient was ambulant without any gait aid and was voiding pain free with a good stream, however erectile function could not be achieved and his marital relations were stringent. To support his marital life, counselling sessions were held with his wife and help of plastic surgeon was sought for implanting a penile prosthesis at an appropriate time.

DISCUSSION

An IED is a bomb fabricated in an improvised manner integrating destructive, deadly, pyrotechnic or inflammable chemicals and designed to destroy or disable people or vehicles. Blast injuries caused by IEDs usually manifest in the form of complex polytrauma and are traditionally classified into: a) primary, that is, injuries solely due to blast's shock waves; b)

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secondary, which primarily result from fragmentation and other objects propelled by the explosion; c) tertiary, which are the result of displacement of the victim or environmental structures; and d) quaternary, which include burns, respiratory injuries, radiologic contaminations and psychiatric injuries[6,7].

Traumatic limb amputations caused by blasts are rare and are often accompanied by other significant injuries[6]. Penile amputation due to blast injuries has rarely been reported. We are informing here this amputation because it is a big stigma to the manhood of a male patient and therefore all possible measures should be taken into consideration in an attempt to save penis. The goal should be sufficient penile size and bulk with enough rigidity, protective tactile, and erogenous sensation and a urethra that can reach up to the glans without any fistula[8].

Figure-1: Figure showing transfemoral amputation on left side.

Penile replantation, first documented in 1929, is the standard treatment in cases of penile amputation[9]. Results depend upon type and extent of injury, duration of warm ischemia, equipment used and surgeon's experience[10].

A penile prosthesis is another treatment option for such cases. These are either malleable (bendable) or inflatable. Very high patient satisfaction rates have been reported internationally with inflatable prostheses, which allow erection at choice and are much easier to conceal[11]. In case of total penile amputation, perinealurethrostomy remains the standard procedure[12].

CONCLUSION

As injuries from explosions are increasing in frequency worldwide due to ongoing war on terror and unrest in most parts of the world especially developing countries, it is unavoidable for all physicians alike to have a working knowledge of the variety of injuries that may be caused by explosives. Physicians should treat patients as a whole and must not concentrate only on most prominent disfigurements. Penile amputation is a big catastrophe in life of a male. The goal should be to restore adequate mass, sensation and functionality of penis triumphing acceptable intercourse and urine flow achievable only through surgery. Penile prosthesis is an adorable choice in patients where penile reconstruction is not expected to give the satisfactory results.

Figure-2: Figure showing penile shaft after reconstruction and urethroplasty.

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