War and Male Genital Trauma-Experiences from Iraq and Afghanistan

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The wars in Iraq and Afghanistan over the past decade have resulted in over 50,000 United States combat related injuries. Genitourinary (GU) trauma accounted for roughly one in twenty of all these injuries. The vast majority of these injuries were puncturing (penetrating) in nature and most were as a result of improvised explosive devices (IEDs). A breakdown of the genito-urinary injuries to the external genitalia was as follows: scrotum in 29%, testis in 9%, and penis in 14%.[1] The aftermath of all these injuries from both a physical and mental standpoint are as yet unknown. Blast injuries to the male external genitalia are very different than those injuries seen in civilian practice. For example, civilian penetrating trauma is typically secondary to gun shot or knife wounds. Blast injuries from IEDs commonly injure the lower extremities in addition to the external genitalia. Typically the wounds are grossly contaminated with debris from the blast. Initial treatment of the wounds depends on the overall severity of the patient's injuries and the concurrent need for resuscitation and surgery to control the damage.

The success in saving the testicle(s) in the war zone hospital has been reported to be as high as 74% in Operation Iraqi Freedom.[2] A high index of suspicion is essential when addressing wounds to the external genitalia following an IED blast. Small entry wounds to the scrotum may be associated with severe testicular trauma. There are multiple levels of care in the war zone such that injured patients are systematically evaluated, treated and transported from point of injury up range to larger facilities and eventually out of the war area. At each stop along the chain, patient wounds are examined, washed out, re-explored and repaired if necessary. The long term effects of blast injuries to the lower urinary tract and external genitalia have not been completely studied as the patients are currently cared for by numerous health care systems around the world in addition to military and Veterans' Administration hospitals. Important information to know would be the number of injured male soldiers with low testosterone, impotence and infertility just to name a few. Also, we must know what additional surgeries were performed to reconstruct these patients. The Army Dismounted Complex Blast Injury (DCBI) Task Force published a report describing the nature, incidence and management of these injuries.[3] By definition, this pattern of wounds involve the traumatic amputation of one leg with severe injury to another extremity and pelvic, abdominal or urogenital wounding. Because GU injuries tend to be extensive, the presence of an urologist in theater is crucial. The Army DCBI task force is an excellent start towards improving care for these patients. A new task force on urologic trauma has been introduced several times in the United States Congress. The goals of the task force are not only to follow these patients and collect data, but also to assure that these patients receive the appropriate urologic care, and educate providers and laypersons.

Although body armor and tourniquets have allowed patients to survive their combat injuries, IED blasts continue to result in significant GU trauma. The groin flap that is meant to extend down from the body armor vest is often not worn or is ineffective in shielding the groin from IED blasts. The British Army has begun to issue boxer underwear to their deployed troops which contain Kevlar fabric meant to protect the external genitalia and femoral vessels. The advantage of this design is that the external genitalia are totally encased by the Kevlar[TM] fabric.

1. Serkin F, Soderdahl D, Hernandez J, Patterson M, Blackbourne L, Wade C.Combat Urologic Trauma in US Military Overseas Contingency Operations. J Trauma 69: S175-178, 2010.
2. Waxman S, Beekley A, Morey A and Soderdahl D. Penetrating trauma to the external genitalia in Operation Iraqi Freedom, International Journal of Impotence Research (2009) 21**,** 145–148; doi:10.1038/ijir.2008.59.
3. Dismounted Complex Blast Injury: Report of the Army Dismounted Complex Blast Force Injury Task Force. Fort Sam Houston, Texas. June 18, 2011. www.armymedicine.army.mil

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