

The Epidemiology of Pediatric Vascular Injury in the Wars in Iraq and Afghanistan: 2002 – 2011

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Traumatic injury remains the leading cause of death in children after the first year of life. Vascular injury comprises a relatively infrequent occurrence compared to other traumatic injuries, however, it is associated with a significant morbidity and mortality [1-2]. The low incidence of vascular injury presents a challenge in directing care in a pediatric population presenting with these types of injuries, consequently, most management has been largely based on adult trauma experiences [1].

Significant data exist on vascular injury in the adult population derived from both civilian and military casualties. The unfortunate reality is that the children of Iraq and Afghanistan have not been left unscathed by the current wars. In the early years of the war, children were noted to comprise 5% of casualties admitted to military hospitals [3]. Children are often victims of unexploded ordnances and land mines, usually resulting in fragmentation injury, with the most common site being the extremities. Frequently, these injuries are accompanied by crushing and/or penetration of soft tissue, vascular compromise, as well as fractures [3].

Similar to adults, the viability and functional outcomes of affected limbs are major concerns in vascular injuries, however, a unique challenge posed by the pediatric population with vascular injuries are vasospasms, vessel caliber, size, and need for adequate circulation for further limb growth and skeletal development [4].

Given the scarcity of data to direct care in a pediatric population with vascular injury, the objective of this retrospective study via use of the Joint Theater Trauma Registry (JTTR) is to evaluate pediatric vascular injuries in the current wars to include demographics, patterns of injury, mechanism, management, and acute outcomes, to supplement current data and therefore provide further direction in care and management of pediatric vascular injuries both within the military and civilian sectors.

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