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Press Release

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HOW KIDNEY INJURY DURING COMBAT AFFECTS THE LONG-TERM HEALTH OF TODAY'S SOLDIERS

Acute kidney injury is still potentially deadly for soldiers wounded in Iraq and Afghanistan, but mortality rates are lower than ever

Highlights

- Among 51 military service members who experienced severe acute kidney injury during the Iraq and Afghanistan wars, 88% of the injuries were due to blasts or projectiles.
- Twenty-two percent of the patients died within 60 days. Although still high, this mortality rate is significantly less than might be expected historically.
- The majority of survivors completely recovered their kidney function.

Washington, DC (September 3, 2015) — Acute kidney injury (AKI) leading to an abrupt or rapid decline in kidney function is a serious and increasingly prevalent condition. While little information is available on the effects of AKI in military personnel who are injured during combat in Iraq and Afghanistan, a new study appearing in an upcoming issue of the *Clinical Journal of the American Society Nephrology* (CJASN) reveals better-than-expected results concerning survival and kidney function.

Given that a single episode of AKI increases the risk of developing chronic kidney disease later in life, long-term monitoring of patients who experience AKI is very important. Individuals with the most severe form of AKI, which requires temporary dialysis to compensate for a significant loss of kidney function, are especially vulnerable to later health problems.

To assess the health of US wounded warriors who developed post-traumatic dialysis-requiring AKI during the Afghanistan and Iraq wars, researchers from the Walter Reed National Military Medical Center analyzed the medical records of 51 military members who were evacuated and treated for the condition. Patients were followed for a median of just over 3 years.

The investigators found that 88% of the injuries were due to blasts or projectiles. Twenty-two percent of the patients died within 60 days, which is significantly less than expected: the lower range of mortality in historical reports for military casualties with severe AKI, and the reported average in recent civilian studies are both approximately 50%.

In this study, of the 40 survivors, 1 developed end stage kidney failure, 1 was diagnosed with stage 2 chronic kidney disease, and 36 regained normal kidney function but developed proteinuria (excess excretion of protein in the urine).

“It is reasonable to assume that the cases reported were similarly injured to those in the Vietnam and Korean wars, and yet the outcomes are very significantly better,” said Jorge Cerdá, MD, FACP, FASN, who was not involved with the study. “Although the reason for the better outcomes cannot be established for sure, it is likely that earlier evacuation from the field, very aggressive resuscitation, and multiple surgical interventions made the difference in permitting survival of those with dialysis-requiring AKI,” added Dr. Cerdá, who is a Clinical Professor of Medicine in Albany Medical College’s Division of Nephrology and a member of ASN’s AKI Advisory Group. He noted that although most survivors normalized their kidney function, the presence of proteinuria is concerning for permanent and possibly progressive injury, which warrants life-long follow up.

Study authors include Jonathan Bolanos, MD, Christina Yuan, MD, Dustin Little, David Oliver, RN, Steven Howard, BA, Kevin Abbott, MD, MPH, and Stephen Olson, MD.

Disclosures: The authors reported no financial disclosures.

The article, entitled “Outcomes Following Post-Traumatic AKI Requiring Renal Replacement Therapy in American Military Service Members,” will appear online at http://cjasn.asnjournals.org/ on September 3, 2015.

Founded in 1966, and with more than 15,000 members, the American Society of Nephrology (ASN) leads the fight against kidney disease by educating health professionals, sharing new knowledge, advancing research, and advocating the highest quality care for patients.

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