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Study examines shift in resuscitation practices in military combat hospitals

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Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) are the first prolonged conflicts the United States has been involved in since the Vietnam War. Medical and surgical advances have often emerged from the battlefields. One of the most important advancements in combat trauma care has been the adoption of DCR, with the basic principles of early, balanced administration of blood products, aggressive correction of coagulopathy (when blood will not clot) and the minimization of crystalloid fluids (intravenous fluids). Adoption of DCR has been credited with improvements in survival among severely injured patients.

Authors analyzed injury patterns, early care and resuscitation among soldiers who died in the hospital before and after implementation of DCR policies. They reviewed data from the Joint Theater Trauma Registry (2002-2011) for combat hospitals. In-hospital deaths were divided into pre-DCR (before 2006) and DCR (2006-2011).

Of 57,179 soldiers admitted to a forward combat hospital, 2,565 (4.5 percent) subsequently died at the hospital. The majority of patients (74 percent) were severely injured and 80 percent died within 24 hours of admission. DCR policies was associated with a decrease in average 24-hour crystalloid infusion volume and increased use of fresh frozen plasma. The average ratio of packed red blood cells to fresh frozen plasma changed from 2.6:1 during the pre-DCR period to 1.4:1 during the DCR period. There was a shift in injury patterns with more severe head trauma cases in the DCR group.

Discussion: "Patients who died in a hospital during the DCR period were more likely to be severely injured and have a severe brain injury, consistent with a decrease in deaths among potentially salvageable patients."

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