

TRAUMASTAT IS SUPERIOR TO CHITOFLEX AND STANDARD GAUZE IN CONTROLLING HEMORRHAGE IN A SEVERE GROIN INJURY MODEL IN SWINE

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Introduction: Hemostatic dressings are increasingly used during the initial treatment of severe hemorrhage, especially in combat. We compared the efficacy of three hemostatic dressings in a severe groin injury model in swine.

Methods: Twenty-three swine received TraumaStat®, Chitoflex®, or standard gauze for hemostasis. Complete femoral artery and vein transections were followed by 30 seconds of uncontrolled hemorrhage. The groin was packed with the randomized dressing followed by 30 seconds of compression. Resuscitation with LR commenced immediately post-compression to the pre-injury mean arterial blood pressure (MAP). Hemostasis failure was defined as blood pooling outside the wound. Animals were monitored and maintained at the pre-injury MAP for 120 minutes culminating with euthanization.

Results: There were no differences in weight, pre-injury MAP, injury severity, or blood loss prior to treatment between groups. Use of TraumaStat® resulted in less hemostasis failure, decreased post compression blood loss, and decreased fluid requirement compared to Chitoflex® and standard gauze. There was no significant difference in mortality between the groups. There were no differences between standard gauze and Chitoflex® with respect to dressing failure, post-treatment blood loss or fluid resuscitation.

Conclusion: TraumaStat® performed significantly better than both Chitoflex® and standard gauze in controlling hemorrhage from a severe groin injury in swine. TraumaStat® may be superior to other standard of care hemostatic dressings for controlling active hemorrhage.

	TraumaStat® (n=8)	HemCon® (n=7)	Gauze (n=8)	
Dressing Success	8*	1	4	
Median Blood Loss	43.7*	625.4*	107.3*	
Median Fluid Resuscitation	1355*	5580	2488	
Survival	8	4*	8	*p<0.05