

Prehospital Emergency Response in a Partial Hand Amputation with Ulnar Artery Transection

Jeffrey Elian¹, Stephanie Givens¹, Nazir Adam¹

¹Orangeburg County EMS, Orangeburg, SC, USA

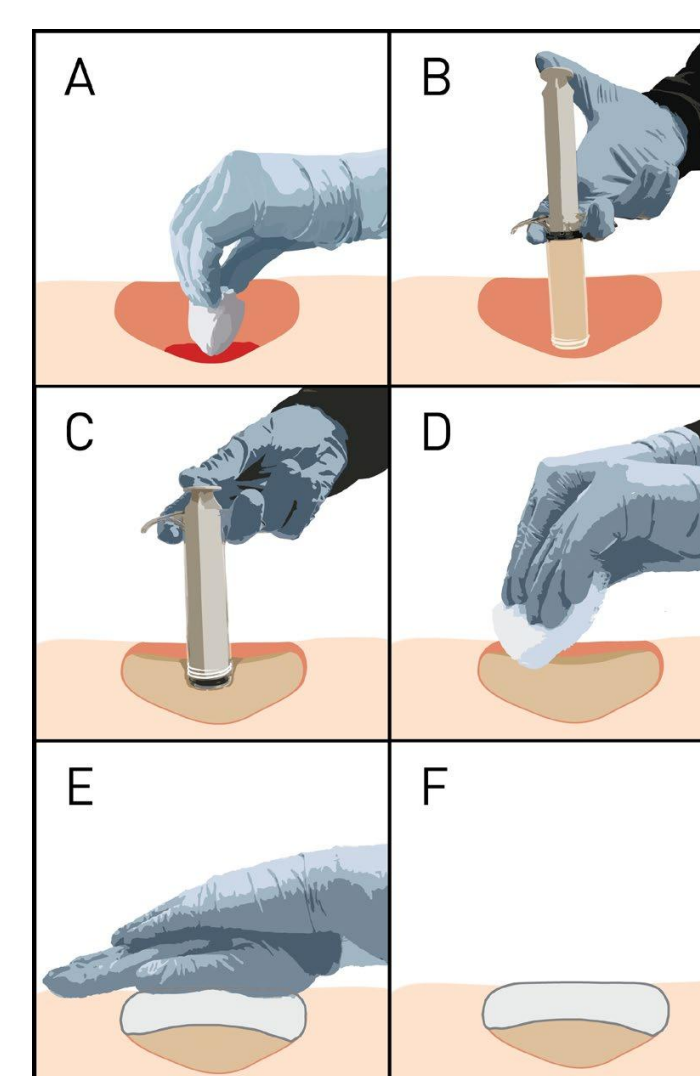


ORANGEBURG COUNTY
SOUTH CAROLINA

BACKGROUND AND PURPOSE^{1, 2}

- Hemorrhage is the leading cause of preventable trauma-related deaths.
- Half of these deaths occur before patients reach definitive care.
- Traditional hemostatic methods have limitations depending on wound type and location.
- Tourniquets can cause tissue trauma, pain, vascular occlusion, and nerve injury.
- Emergency Medical Services (EMS) often combine several hemostatic approaches.
- We present a case of an ulnar artery transection and soft tissue trauma managed with a tourniquet and Traumagel.

TRAUMAGEL



Traumagel is a single-use, hemostatic gel for temporary external use only. It is viscous, opaque, and tan colored and is supplied as an individually pouched 30 mL hemostatic gel syringe.

CASE IMAGES: SURGERY AND RECOVERY



Left hand after vascular and bone reconstructive surgery



Left hand several weeks after injury and definitive repair. Patient expected to regain 90% of function

CASE DESCRIPTION

- A 46-year-old male sustained a partial amputation of his left hand following a miter saw accidents.
- EMS found the patient normotensive but with severe hemorrhage from a completely transected ulnar artery in combination with significant metacarpal injuries.
- Tourniquet was applied proximal to the injury site.
- However, with a prolonged evacuation, high risk of ischemia and pain, and increasing loss of feeling in the fingertips, consideration was given to controlling hemostasis with Traumagel.
- Traumagel was applied and pressure maintained with resultant hemostasis and tourniquet removal.
- After a 2.5-hour transfer, the patient was taken to the operating room for ulnar artery repair and metacarpal reconstruction.

CASE IMAGES: ACHIEVING HEMOSTASIS



Traumagel applied to the miter saw following removal of the tourniquet.



Arrival at definitive care with Traumagel still present in the wound and hemostasis maintained

CONCLUSIONS

- Traumagel's application allowed for hemostasis and tourniquet removal in the setting of a prolonged extrication time and potential for ischemic complications.
- Following tourniquet removal in the field, there was complete hemostasis.
- Durable hemostasis facilitated safe transfer with tissue preservation.
- Traumagel was easily irrigated out prior to definitive surgical repair.
- Traumagel may be incorporated as an effective hemostatic adjunct in difficult bleeding scenarios.

REFERENCES

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2. Kleiman, D.J., et al., The Use of TRAUMAGEL ((R)) for Hemorrhage Control in a Complex Head Laceration: A Case Report. *Open Access Emerg Med*, 2025. 17: p. 339-343.

CONFLICT OF INTERESTS

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