TRAUMA ROUNDS AT HENRICO DOCTORS’ HOSPITAL
Sharing our Latest Stories & Patient Outcomes with our EMS Team Members

The Henrico Doctors’ Hospital Trauma Rounds newsletter is designed to share what happens to patients after the trauma room. As a designated trauma center, Henrico Doctors' Hospital is dedicated to the team approach it takes in order to return patients back to their pre-injury baseline. Sharing outcome information with our EMS partners and trauma team members is vital to our success and it is our hope that we can continue to improve our local trauma system with your support.

Hand Trauma Case Study

As a Level II trauma center, Henrico Doctors’ Hospital is required to have surgical specialists that are able to treat all types of complex injuries. Injuries to an individual’s hand necessitate the skills of an orthopedic hand specialist. Dr. John Blank, one of the members of our Trauma Hand Panel, specializes in surgery of the wrist and hand. The following case presentation highlights a patient that received treatment at our trauma center after sustaining a self-inflicted penetrating injury to their hand.

In this case study, EMS was dispatched to find an individual sitting with a self-inflicted penetrating injury to their left hand. Law enforcement had applied a tourniquet to the patient’s arm and therefore there was no active bleeding from his hand and minimal blood loss on scene. The EMS providers removed the tourniquet which did not cause bleeding from his wounds.

The prehospital care of this patient is noteworthy for several reasons. The time of dispatch to time of arrival at Henrico Doctors’ Hospital was twenty-one minutes. During the thirteen minutes the crew was with the patient, they were able to assess the patient and successfully achieve intravenous access, determine the patient’s level of pain, administer pain medication, and document two sets of vital signs including GCS.

Emergency Department staff initiated a Bravo Trauma Team Activation due to low blood pressure and the use of a tourniquet. Currently, at HDH the use of a tourniquet is not a trigger for a trauma team activation. However, trauma centers have been updating their alert criteria to include the use a tourniquet in the prehospital environment.

Once the trauma team determined there were no other life threatening injuries a detailed physical exam of the hand showed bruising to hand around the wound site, a lateral wrist wound, palpable radial and ulnar pulses, no sensory defects, the 4th and 5th digits were held in a flexed position and had decreased voluntary extension.
The patient’s x-rays revealed fourth and fifth carpometacarpal joint fracture and dislocations with severe comminution (high velocity fracture causing multiple fragments) of the hamate bone and partial comminuted injury of the triquetrum bone. As a penetrating injury the fractures were open with known dirty particles in them.

The carpometacarpal joint is where the bones of the hand meet the bones of the wrist. The hamate bone is one of eight bones that make up the wrist. Hamate fractures are rare occurring only in about four percent of all carpal fractures. The triquetrum bone, also one of the eight small bones of the wrist, is the second most commonly fractured bone of the wrist. Both of these bones are usually fractured after a fall landing on an outstretched hand.

From the trauma room the patient went directly to the operating room for irrigation and debridement of the open fractures. While in the OR, Dr. Blank repaired the patient’s fractures and dislocations. A carpal tunnel release was required and a repair of the superficial palmar arterial arch was performed. The elapsed time from the patient’s injury until he left the OR was three and a half hours.

The patient was admitted for pain management, IV antibiotics, and an evaluation by Occupational Therapy. The patient had a gutter splint in place at time of discharge and followed up with Dr. Blank as an outpatient.

Dr. John E. Blank specializes in surgery of the elbow, wrist and hand. He earned his medical degree from Georgetown University School of Medicine, where he graduated cum laude. He performed his internship and residency at The University of Pennsylvania. He was then awarded a fellowship for Hand and Elbow Surgery in Boston at Tufts University School of Medicine. (A fellowship is an extra year of specialized training that a physician chooses to pursue after completing medical school and residency training.)

Dr. Blank and his medical staff treat adult and pediatric patients with musculoskeletal conditions and injuries of the hand, wrist, and elbow. Many patients benefit from conservative treatments including medication, splinting, physical therapy and/or injections. However, some will require surgery. He is skilled and experienced in many surgical techniques including arthroscopy and microsurgery, performing over 1000 procedures in the last two years.

In addition to being certified by the American Board of Orthopaedic Surgery, Dr. Blank also holds the Certificate for Added Qualifications in Surgery of the Hand. He is well respected in the medical community and holds the honor of being named one of Richmond Magazine’s “Top Doctors” in 2006, 2008, 2010, 2011 and 2012. He enjoys teaching and is an upper extremity/hand anatomy instructor to sports medicine fellows at Orthopaedic Research of Virginia.


Physician Spotlight

John E. Blank, MD
Tuckahoe Orthopaedics