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**DOWN TO THE WIRE: IDENTICAL TRAUMATIC INJURIES IN A FIELD SETTING:  
A CASE STUDY**

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## **Down to the Wire: Identical Traumatic Injuries in a Field Setting: A case study**

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**Background:** Two healthy teens ages 15 and 17 respectively, with no previous history or pathology to the upper extremity or neck, sustained matching lacerations on the upper left arm and anterior neck. The injuries occurred to both patients simultaneously due to an accident while operating a four-wheeler. The 15-year-old driver lost control of the four-wheeler and drove through a barbed wire fence, causing multiple lacerations. The 17-year-old male, who was seated on the back of the four-wheeler sat taller than the 15-year-old female who was operating the machine. The taller male collided with the middle strand of the barbed wire fence, while the female collided with the bottom strand. The impact into the barbed wire fence caused both patients to receive matching lacerations. The lacerations to the upper left arm and anterior neck were very deep and required immediate medical attention. The patients' family members called EMS who responded to the scene and initiated medical care. The patients complained of pain of 7/10 on the pain scale along the site of the lacerations. Upon initial evaluation by EMS personnel, bleeding was obvious but controlled. Several layers of muscle and adipose tissue were visible at all laceration sites across the upper left arm and anterior neck. Both patients were conscious, breathing, and alert. Vitals were taken and noted to be within normal limits. Bleeding was controlled using direct pressure and bulky dressings. Spinal precautions were taken with both patients due to mechanism of injury.

**Differential Diagnosis:** Lumbar spine fracture, thoracic spine fracture, cervical spine fracture, rupture of carotid artery, rupture of brachial artery, hypovolemic shock

**Treatment:** The patients received treatment on the scene and en route to the hospital. The treatment provided on the scene included wound cleaning and bleeding control. The lacerations on the neck were protected with sterile dressing and gauze. After addressing that the wounds were protected, and the carotid arteries were secure, cervical collars were applied on both patients to ensure there was no damage to the cervical spine, given the mechanism of injury. IV fluids were started to combat potential hypovolemic shock due to blood loss. Vitals were monitored throughout the one-hour transport. Both patients were transported to Primary Children's Hospital where they were evaluated by the ED staff, including ENT and Orthopedic specialists.

**Uniqueness:** What makes this case so unique is the fact that both patients sustained identical lacerations to the upper left arm and anterior neck. The lacerations were very deep. The fact that the lacerations came very close to the patient's carotid arteries makes this case very interesting as well. The application of the cervical collar could have added additional stresses to the carotid arteries and the patients could have had a very different outcome.

**Conclusion:** Two previously healthy teenagers, sustained matching lacerations to the upper left arm and anterior neck. The patients received treatment on the scene and while en route to the hospital. This is an important case because it helps EMS to understand the importance of managing potentially life-threatening injuries while on the scene. It also encourages EMS to hone in on their decision-making skills about whether or not to apply a cervical collar given the mechanism of injury.