



Pathology Biology Section - 2012

G76 The Reconstruction of an Unusual Pedestrian Road Trauma Using Forensic Pathology and Forensic Veterinary Medicine

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After this presentation, attendees will understand how cooperation between experts in pathology and veterinary medicine can solve a crime involving both humans and animals.

This presentation will impact the forensic science community by highlighting the fact that experts with knowledge of the anatomy of different animal species can contribute to solving a crime.

Traffic accidents have increased in the last decade. Pedestrians are most affected group among the victims of vehicle accidents. At autopsy, it is evident that the most common cause of pedestrian death is central nervous system injury, followed by skull base fractures, internal bleeding, lower limb hemorrhage, skull vault fractures, cervical spinal cord injuries, and airways compromise. The determination of fault can be assigned through the reconstruction of the dynamic of the road accident. The reconstruction of the accident is made through on-site investigation, a survey of the vehicle involved and victim examination.

A case study concerning a car accident where both humans and pets were involved is reported here. During spring 2011 an old man and his dog walking along the road were knocked down by a SUV. The driver stated that the man and his dog were walking in the middle of the road.

The investigation and the reconstruction of the crime scene were conducted by a team composed of a forensic pathologist and a forensic veterinarian.

During the investigation, the pedestrian and his dog were recovered on the brink of the road. It was determined that an autopsy should be conducted on the man and a necropsy on the dog. In addition, a complete inspection of the SUV was conducted.

The results of the autopsy and necropsy were compared following the histological analysis. This information was also used to reconstruct the collision.

Both the man and his dog showed lower limbs fractures with features indicating a collision on the dorsal side of the body. Furthermore, the man and his dog showed cervical spinal cord injuries because of traumatic neck bend. The comparison between the human and the animal fractures and the autopsy results excluded allegation that the man and his dog were in the middle of the road. In fact, the biomechanics of injuries was suggestive of a collision that the pedestrian and his dog were struck from behind causing the propulsion along the roadside. This finding was supported by the presence dog hairs and fibers of clothing belonging to the man on the right front bumper of the car.

This unusual case was solved through the collaboration between the investigation using forensic pathology and veterinary forensic medicine.

Forensic Sciences, Forensic Pathology, Forensic Veterinay