



Engineering Sciences Section – 2007

C40 Experimental Traffic Accident in Order to Know Circumstances and Cause of Death

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After attending this presentation, attendees will understand the utility of autopsies in the event of traffic accidents, especially if the speed at the time of the impact is low.

This presentation will impact the forensic community and/or humanity by pointing out the importance of the criminal reconstructions and particularly the need for reproducing the exact conditions of the accident.

An experimental traffic accident was conducted in order to prove the responsibility of a vehicle (and the driver) in a criminal death. A 76-year-old man was the victim of a traffic accident in Spain. He was hit by a four-wheel drive vehicle (4WD) that immediately sped off. An autopsy performed in Spain shown frontal wound, occipital, thoracic and elbows lesions, and haematomas on the legs. He was immediately cremated in Spain. The French enquiry showed that he had inherited a fortune of 30 million two years ago and get married several months after.

Initially, it is very important to note that, in the international literature, no experimental studies or similar cases involving a 4WD and a pedestrian were found and the INRETS had no knowledge regarding this type of accident resulting in a fatal outcome.

In order to assist police and judicial inquiries, a reconstruction was conducted with the 4WD vehicle and a crash-test dummy (Hybrid II). Several speeds and positions were tested and all seven tests were recorded by video.

The evidence showed that the damage to the vehicle caused by a dummy of the same height and corpulence as the victim, was localized in the same place as the original impacts, provided that it was a head-on impact occurring at 30 km/hour. The cause of death was related to a violent cranio-encephalic trauma more or less associated with a thoracic trauma responsible for anoxia as a result of respiratory disorders.

The success of this experiment depended upon cooperation between the magistrate and medical examiner. It is possible that this is the first experiment of its kind conducted for a judicial purpose.

Experimental Traffic Accident, Dummy, Camera Recording