



### F41 Train-Pedestrian Collision: A Case Report

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After attending this presentation, attendees will: (1) be familiar with train safety issues, (2) understand the challenges in dealing with massive tissue injury, (3) be familiar with the role of dentistry in making the identification of the victim, and (4) understand the benefits of recovery of all tissue fragments from the accident scene.

The presentation will impact the forensic dental community by presenting the difficulties encountered in a case where massive tissue damage was related to a relatively infrequent train-pedestrian collision.

According to statistics provided by Operation Lifesaver, every two hours somewhere in the United States a motor vehicle or a pedestrian is struck by a train. In 2006, 2,897 people were injured or killed while working, walking or playing around railroad tracks, equipment or facilities. Fortunately most of these injuries were caused by falling from, tripping over or otherwise encountering stationary railroad equipment or tracks. These accidents typically resulted in injuries such as sprains, lacerations and broken bones but only very rarely did they result in loss of life. When moving trains are involved, they most commonly involve collisions with motor vehicles, often resulting in serious injury or death. Another relatively common occurrence is injury and the loss of limbs to railroad personnel and trespassers as a result of a previously stationary train making an unexpected movement. Least common are collisions between a pedestrian and a moving train resulting in loss of life. The reason these incidents are so rare is obvious; moving trains are very large and not easily overlooked, they are noisy so their approach is generally heard in advance of any danger and a collision can easily be avoided by simply getting clear of the track. Cases of pedestrian-train collisions where death occurs are usually associated with the pedestrian crossing a bridge or entering a tunnel and being caught when a train unexpectedly appears and they can't clear the tunnel or bridge in time to avoid the encounter with the train. A collision with a pedestrian on open ground in a heavily populated area is among the rarest of occurrences involving trains. This presentation is a case report of such an event that occurred in broad daylight only a few hundred yards from a busy shopping center. At the time of the collision, the train's speed was estimated at approximately 40 MPH. After impact, the train, due to its tremendous momentum even at such a relatively slow speed, took almost a half mile to come to a complete stop. As expected, the collision caused massive injuries of the victim with significant fragmentation and scattering of the remains over a length of approximately 600 yards.

The presentation will briefly discuss train safety issues in conjunction with the accident. It will also describe the challenges faced by the dental forensic team in dealing with the massive injuries and fragmentation. Of particular interest is the difficulty encountered in reconstructing the facial structures to obtain adequate postmortem radiographs. Additionally it will describe some of the challenges faced by the recovery teams to collect all the tissue fragments from the scene. With the remains dispersed over such an extended area and the collision creating such small fragments, recognition and recovery of all the tissue remnants presented a significant challenge for the recovery team. In cases such as these, having a physician, dentist or anthropologist on the recovery team to help identify the smaller fragmented parts to make sure all tissue fragments are recovered would have been beneficial.

The learning objective of this presentation is that at the conclusion of the presentation, the participants will have a better understanding of the issues and difficulties encountered in this case.

The presentation will impact the forensic dental community by describing the difficulties encountered in a case with massive tissue destruction and fragmentation to better prepare them in the event a similar accident occurs in their communities.

**Train, Pedestrian, Safety**