D77 Lethal Railroad Injuries in Western Anatolia Eskisehir, Turkey: 2001-2010

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After attending this presentation, attendees will understand that transportation is not just a service that has a major social benefit but also a service that has both communal and individual costs. These costs are not just economical ones, but also include transportation duration, undesired environmental effects, and accidents. The most important one among these costs is human deaths that occur due to accidents.[1-4] In Turkey, which has a total of 12,000km railroad web, only 5% of the load and passenger transportation is conducted via railroads. In Turkey, approximately 80 million individuals per year use the railroads as a mean of transportation. Seventy-five percent of these train rides are made by commuter trains.[5]

This presentation will impact the forensic science community by describing that in Turkey, where only 5% of all load and passenger transportation is being conducted via railways, it has been determined that railroad accidents and the deaths related to these accidents are higher than would be expected when compared to other countries in which the percentage of the railroad transportation exceeds that of Turkey. The results of this study show that security precautions in railroad stations, level crossings, and the railroad segments that are passing from residential areas should be increased. Railroad accidents are seldom compared to highway accidents but have much more lethal results.

Material and Method: In this study, 2,615 forensic-qualified deaths that occurred in Eskisehir between 2001 and 2010 were assessed. Thirty-eight of the 2,615 cases (1.5%) were railroad accidents and they have been reviewed.

Results: The ages of the cases varied between 7 and 72 years old (mean age: 37 (SD: 11.2)) and 81.6% were male. It was observed that there were injuries to the upper body (chest and back) in 78.9% of cases, to the abdomen and pelvis in 71.1% of cases, and injuries in both upper and lower extremities in 81.6% of the cases. Toxicological screening revealed ethyl alcohol presence in levels between 21mg/dL and 291mg/dL (average of 71mg/dL, SD: 43) in 16 (42%) of the cases.

After the examination of the autopsies and the judicial investigation, it was recorded that 76.3% of the cases were due to accident and 23.7% of the cases were suicide events. It was seen that 81.6% of the cases took place outside railroad stations and 52.6% occurred during summer months. Moreover, 57.9% of the incidents happened on either Friday, Saturday, or Sunday. Fifty-seven point nine percent lost their lives between 6:01 p.m. and 12:00 a.m.

References:

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Railroad Accidents, Train Collision, Autopsy

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