

E46 A Remote-Controlled Flail Mower Work-Related Death: Who Handled the Controller?

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Learning Overview: After attending this presentation, attendees will focus on the difficulties correlated to the traumatic event reconstruction in cases of complex traumatic dynamics, especially if a composite machine or new technologies are involved.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by highlighting the importance of the collaboration between the forensic pathologist and the engineer in traumatic event reconstruction in cases of complex traumatic dynamics.

Since industrialization and the implementation of machinery's use in various kinds of work, forensic pathologists have had to face different types of work-related injuries. In the agricultural and forestry sector, tractors and self-propelled machinery are involved in many fatal accidents. In these cases, roll and runover accidents represent the most common cause of death.¹⁻³ More rarely, the literature describes fatal accidents with mowing machines (motor and brush mowers, flail mowers, shredders).^{4,5} Regarding fatal flail mower injuries, only a case report in which an object mobilized by the mowers shoots the bystander operator have been published.⁶ In this presentation, the case of a work-related death due to a fatal remote-controlled flail mower accident is presented.

A 57-year-old man was fatally run over by a remote-controlled flail mower while working with a colleague in a field. The forensic pathologist and the engineer arrived at the crime scene to understand the dynamics of the event. The visible lesions caused by the machine were: a huge laceration of the head with a rupture of the cranial theca and leakage of the brain; the amputation and near amputation of the right upper and lower limbs, respectively; a soft tissue laceration of the right scapular area; and several excoriations that mimicked the shape of the metallic part of the mower. A total body postmortem Computed Tomography (CT) was performed, revealing several ribs and other bone fractures, while internal organs were not injured, apart from the brain. The autopsy excluded any significant concomitant disease. The man's colleague informed the police that the victim was handling the mower controller.

In a case of work-related traumatic death, the judicial authority usually investigates to understand if there is a suspicion of manslaughter. For this reason, the exact reconstruction of the traumatic event has an essential role. The forensic pathologist, in collaboration with the engineer, has to piece together all the clues collected during both the crime scene examination and the autopsy. In this case, the main issue was to understand whether the accident was caused by a machinery malfunction or by human inattention. Then, if human inattention is proved, it should be investigated who was handling the machine controller. The engineering analysis excluded any machine malfunction and the controller did not present any damages or bloodstains. In accordance with the peculiar lesion pattern, the only reasonable hypothesis was that the man was run over while standing and the man's colleague was handling the controller, involuntarily causing the fatal accident.

Reference(s):

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