



Pathology Biology Section – 2011

G24 Death From Severe Anorectal Injury of a Jet Ski Passenger

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After attending the presentation, attendees will understand the basic principles of jet ski propulsion and the potential for hydrostatic injury to the perineum.

This presentation will impact the forensic science community by bringing awareness to an unusual mechanism of injury in jet ski accidents. Such knowledge would prevent initial confusion and unnecessary use of resources to investigate other causes. In addition, it would serve to promote better safety practices in the use of jet skis.

This presentation will highlight the unusual case of a young woman who sustained lethal anorectal trauma after falling from the back of a jet ski.

It is recognized that both the popularity of personal watercraft and injuries related to their use have been increasing. Non-lethal lacerations, contusions, sprains, and fractures make up the majority of these injuries. Rare, but more serious injuries include closed head injury and intra-abdominal injury involving high velocity and rapid deceleration. The latter types of injury are typically those which result in fatality involving personal watercraft.

In the case presented, the autopsy showed a midline laceration posterior to the vaginal introitus which passed through the anus. The laceration extended to involve the deep soft tissues and the distal rectum was seen to be transected and free in the pelvic cavity. The full extent of her injury became apparent when the laceration was seen to extend within the retroperitoneal space to a level above the kidneys.

Given the extensive injury, initial suspicion surrounded possible impalement by a solid object. Witnesses at the scene as well the operator of the jet ski reported that the decedent fell straight back into unobstructed water. A subsequent review of the accident site revealed no

fixed obstructions. The decedent was initially conscious in the water, but became unresponsive shortly after being pulled to shore. Bloody drainage was seen from her perineum, and her wound was extensively packed. Despite this, resuscitation was unsuccessful.

A review of her medical history revealed a recent c-section. Her obstetrician reported that her c-section had been uncomplicated. Autopsy supported this as her gynecologic organs were intact. No other injuries were identified. The combination of history, literature, and autopsy findings indicated that the cause of death in this case was due to severe anorectal trauma from the water thrust of a jet ski.

Risk factors for injury in this case included the fact that the decedent was a passenger and fell straight backward. When a passenger falls from a jet ski, the throttle does not shut off automatically as it would for a driver who fell. Further, the decedent was wearing a bathing suit at the time of the accident. A wetsuit may have provided more protection.

While occasional case reports of similar, non-fatal injuries from jet ski accidents have been documented in the surgical literature, such a case has never been reported in the forensic literature to our knowledge. In the surgical cases reported, patients who sustained vaginal and/or rectal lacerations underwent successful repair with recovery of normal function.

Anorectal, Trauma, Jet Ski