

## A Case Report on a Personal Watercraft Induced Large Traumatic Rectal Injury

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### Introduction:

Personal watercrafts (PWC) have been an increasingly popular recreational activity. Given the potential for high speeds, trauma can occur from impacting the water at high velocities, hydrostatic jet stream injuries from the PWC exhaust, and abrupt acceleration-deceleration of the jet ski. Jet stream pressures can cause significant hydrostatic injuries. We describe the largest reported case of a posterior extraperitoneal rectal injury from a jet ski injury.

### Case Presentation:

A 26-year-old female presented as a trauma alert after a jet ski collision. ATLS was performed with primary survey intact. Vital signs on arrival demonstrated a blood pressure of 92/60 and a heart rate of 99 beats per minute. External rectal exam revealed a 3 cm perineal laceration and digital rectal exam was positive for gross blood and palpable posterior rectal laceration. Given the patient's hemodynamic stability, CT imaging was performed to complete her trauma evaluation. A large pre-sacral hematoma and a large posterior rectal perforation without free peritoneal free fluid or air were identified of the CT of the abdomen and pelvis.

Exam under anesthesia and sigmoidoscopy revealed a 20 cm full thickness posterior rectal laceration from the presacral space inferiorly to the anus with transection of the anal sphincter. She was also noted to have a superficial anterior laceration of the rectum. The wound was thoroughly irrigated, a drain was placed along the presacral space exiting externally. The rectal laceration was closed in 2 layers from the sphincters to approximately 8cm proximally anterior to the drain. The superior portion of the rectal wall was left open. Diagnostic laparoscopy showed a nonexpanding hematoma in the pelvis. A diverting sigmoid loop colostomy was performed. On the first post operative day, she returned to the operating room for a second look with colorectal surgery. The sphincter repair was intact, and no further rectal repair was attempted.

### Discussion:

Only eight case reports reporting this injury pattern currently exist. Our case is unique given that it is the largest reported injury of this nature with complete disruption of the posterior rectum from the presacral space, through the anal sphincter and external anus.