

Management of a traumatic anorectal laceration in the vein of polytrauma: A case report

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Abstract: *The rectum is the least commonly injured organ in the trauma, with an incidence of approximately 1% to 3%. Gunshot wounds compose 85 to 90% of rectal trauma, blunt trauma 5 to 10% and stab wounds approximately 5%. A 27-year-old male was injured as a result of a collision with a tractor, while he was working. This is a case report of blunt trauma etiology, for which the entire patient's right extremity was amputated, including 1/2 of the right pelvis, the right pubic ramus and the right iliac crest of the sacrum. The patient was presented to the emergency room in the conditions of a traumatic-hemorrhagic shock, for which 10 days of rehabilitation were required for the patient to be hemodynamically stable and to undergo the intervention of the reconstruction of the abdomino-lumbar wall. Rectal trauma consisted of laceration in 1/3 of the inferior rectum and anal sphincter. In this context, 1/3 of the rectum was sutured, and plastic surgery of the anal sphincter and Hartmann colostomy was also performed. Although the surgical intervention was performed on the 11th day, with the placement of a double Vicryl mesh 30x30 cm to ensure the defect of the lumbar wall, the hospital stay was 50 days until the complete healing of the wounds. The immediately life-threatening injuries, requires exploratory attention, while primary repair of rectal injury with Hartmann's procedure would be a valid option. In such cases, a multidisciplinary approach was required all the way from treatment to recovery and rehabilitation.*

Keywords: *emergency surgery; polytrauma; rectal trauma; amputation; case reports*

INTRODUCTION

Rectal injuries are rarely seen in isolation, but often in the vein of polytrauma. For this reason, there is wide variation in their management, with a lack of a general consensus between surgeons and researchers (1). Most parts of the rectum are extraperitoneal, with the exception of the upper third where the peritoneum covers the front and side (2). Colostomy and drainage are concluded to be the foundation for effective treatment of extra-peritoneal rectum injuries (3).

CASE PRESENTATION

We present a case report of blunt trauma etiology, while a 27-year-old male was injured as a result of a collision with a tractor, as he was working. The patient was presented in severe condition in the Emergency Department, of the Univeristy Trauma Hospital, Tirane, Albania. The patient was in a state of profound traumatic hemorrhagic shock, while he was brought intubated from a regional hospital, where the first wound treatment was done. Arterial pressure was 80:40 mmHG, heart rate 99 and respiratory rate 12. Complete red blood count showed a low RBC of $3.17 \times 10^6/\mu\text{L}$, low Hbg of 9.0 g/dL, and a low HCT of 26.1%. Regarding gases and electrolytes in the blood, laboratory findings showed a low arterial blood pO₂ of 75.2 mmHg, cHCO₃-st 23.70 and hypokalemia of 3.00 mmol/L accompanied by hypernatremia of 148.00 mmol/L. There were no pathological alterations in the abdominal ultrasound examination. The entire patient's right extremity was amputated, including 1/2 of the right pelvis, the right pubic ramus and the right iliac crest of the sacrum. The complete absence of the dexter abdominal and lumbar wall, including the dexter perineal region, was noted. Exposure of the iliac vessels and the right ureter was also observed, accompanied by herniation of the intestinal loops. (Image 1).



Image1: Patient presented at Emergency Department, with amputation of the extremity, ½ pelvis and absence of abdominal and lumbar wall

The surgical intervention was performed on the 11th day, with the placement of a double Vicryl mesh 30x30 cm to ensure the defect of the lumbar wall. (Image 2)

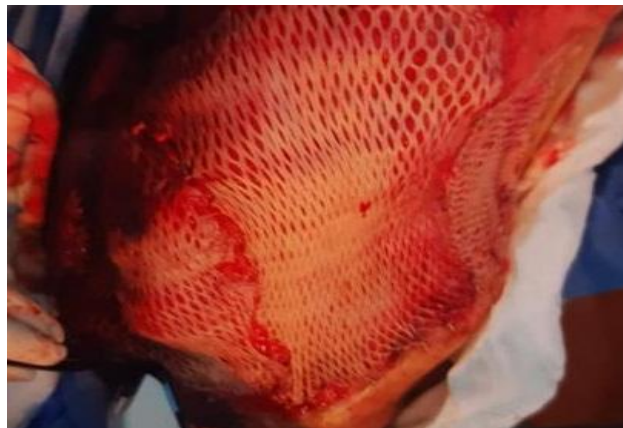


Image2: The placement of a double Vicryl mesh 30x30 cm

Rectal trauma consisted of laceration in 1/3 of the inferior rectum and anal sphincter. In this context, 1/3 of the rectum was sutured, and plastic surgery of the anal sphincter and Hartmann colostomy was also performed.



Image 3: Primary repair of rectal and other injuries

The hospital stay was 50 days until the complete healing of the wounds. After plastic surgery, the patient leaves the hospital cured and prepares to receive prosthetics at another clinic. (Image 4)



Image3: Patient with the wounds healed and prepared to leave the hospital

DISCUSSION

The main management principles of rectal trauma include variable use of direct primary closure, diversion of fecal matter, pre- sacral drainage and/or distal rectal washing (rarely used)(4). Rectal trauma can be very complex, particularly when it involves fractures or other traumas(5). Although the discussion continues on the surgical intervention of the extraperitoneal or intraperitoneal parts of the rectum, primary repair of rectal injury with Hartmann's procedure is a valid option when the injury is acute. While the mortality of recent years is reported to be close to 14% for rectal trauma, the various experiences of treatment vary in terms of mechanisms of injury and availability of resources(6,7). Meanwhile, the cut-off of 25% of injury involvement of the circumference is a good indication for choosing between performing or not colonostomy(8).

CONCLUSIONS

Blunt trauma due to work accidents might be immediately life-threatening injuries. Rectal trauma might be noted, while primary repair of rectal injury with Hartmann's procedure would be a valid option. In such cases, a multidisciplinary approach is required all the way from treatment to recovery and rehabilitation.

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