

## Management of Perirectal Laceration without Fecal Diversion: A Case Report

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Clinical research on multiple lacerations of perineum or buttock is sparse and rare so limited to case reports. But a missed rectal injury combined bladder or vessel can have devastating consequence. Although it is generally known that it should be treated accompanying with diverting ileostomy or colostomy, the aim of this case is announce the possibility of management of perirectal injury without diversion. [ J Trauma Inj 2017; 30: 55-58 ]

**Key Words:** Perirectal laceration, Trauma

### I. Introduction

Clinical research on multiple laceration of perineum or buttock is sparse and rare so limited to case reports. But a missed rectal injury combined bladder or vessel can have devastating consequence. The aim of this case is to provide reminding clinical feature with a review of the literature and provide possibility of management not accompanying with diversion unlike generally known treatment.

### II. Case Report

A 35-year-old male patient presented to the emergency room with gross perirectal bleeding. The pain of Vas score was 5 initially. He was looked well and hemodynamically stable. The patient had no underlying disease or previous operation history. He admitted 2 hours after fall down 2 m following window repair. Patient was stabbed dirty railway remnant told. On physical examination he had three perianal lac-

eration on 2, 6 and 7 o' clock. The most deep wound was 6 o' clock including ischio-rectal and ischio-anal soft tissue inward (Fig. 1). The outstanding feature was flap-door like and lack of middle skin (diameter 3×4 cm) (Fig. 2). He had a flat abdomen and there was no tenderness or rebound tenderness. Laboratory data showed neither leukocytosis nor anemia. Chemistry and hemostasis laboratory data were within a normal limit. A CT scan performed on the patient revealed mild soft tissue defect except coccyx fracture and avulsion (Fig. 3, 4). That showed no abnormalities in the intra-peritoneal and nearby organ. The patient was put on anti-tetanus toxoid and prophylactic broad spectrum antibiotics intravenously. Immediately emergency operation was performed under spinal anesthesia. The treatment was consisted of massive saline irrigation and tissue debridement. The deepest wound of 6 o' clock was reconstructed by advancement skin flap including skin and subcutaneous fat area. FAST was not performed. ISS score was 1 limited to lower extremity area. According to Abbreviated Injury Scale

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2008, it had to be regarded as grade I. There was no perirectal fistula on digital examination (Fig. 5). Patient did not complain of incontinence and urinary distention.

Three silastic Penrose drain were inserted into wound with wearing a diaper for 2 weeks (Fig. 6). Oral feeding was started on postoperative day 1. Patient did not show fever or hemodynamical instability. We have used broad spectrum intravenous antibiotics for 7 days to prevent unidentified spillage of feces from colon (Piperacillin+ Tazobactam 4.5 g IV q 8 hr+

metronidazole 500 mg IV q 8 hr) After 2 weeks, reoperation was performed on the grounds necrosis and wound drain removal under local perianal block (Fig. 7). Necrotic wound was as little as possible while surgery to remove and inserted Povidone-iodine wet gauze ended. 10 days later reoperation was performed for wound repair 2 days later third surgery patient discharged by reason of holidays. In outpatient 3 weeks after he was not appealed wound scar over other specific functional disorder).



**Fig. 1.** most deep wound of 6 O'clock.



**Fig. 2.** The lack of outstanding feature was flap-door like and middle skin.



**Fig. 3.** A CT scan performed on the patient revealed mild soft tissue defect except coccyx fracture and avulsion.

### III. Discussion

Multiple perirectal laceration to the buttock and anus is common as a serious diagnostic and treatment concern in emergency department. But clinical research on perirectal laceration to the buttock is not common (1) A missed rectal injury can have devastating consequences so meticulous examination and treatment



**Fig. 4.** A CT scan performed on the patient revealed mild soft tissue defect except coccyx fracture and avulsion.

plan are required. Excluding iatrogenic, sex-related, and foreign body injuries, the most common injury is a result of a pelvic gunshot wound(2) However, even in the setting of transpelvic gunshot wounds, penetrating injury to the rectum are seen in a small minority of patient and very rare in Korea.

Patients should first be assessed with attention to the primary survey to ensure immediate life-threatening injuries are stabilized. During the secondary survey, anorectal trauma can be assessed and evaluated. When possible, obtaining history related to the injury, associated symptoms including abdominal and genitourinary symptoms, as well as baseline bowel function and continence can be helpful. Digital rectal examination should also include an assessment of resting and squeeze tone when feasible. Herzig D et al.(2) recommended computed tomographic scan of the abdomen and pelvis for hemodynamically stable patients including the use of triple contrast (intravenous, oral, and rectal), and anorectal examination under anesthesia to minimize the possibilities of missing any overlooked injuries. The standard management of penetrating

perirectal trauma consists of perioperative broad spectrum antibiotics, a diverting colostomy, and pre-sacral drainage. Patients also should be treated in trauma center equipped with hybrid operating room for multidisciplinary teams 24/7.(1) If controlled bleeding from major iliac vessels exists, direct retroperitoneal pelvic packing should be accompanied. Presacral drainage is believed to prevent perirectal infections due to fecal contamination and has been used widely to reduce abscess formation in extraperitoneal rectal trauma. This evidence derives mainly by war injury,(3) but some authors(4,5) demonstrated no difference in infection rates associated with civilian rectal trauma caused



**Fig. 5.** There was no perirectal fistula on digital examination.



**Fig. 6.** Three silastic Penrose drain were inserted into wound with wearing a diaper for 2 weeks.



**Fig. 7.** After 2 weeks, reoperation was performed on the grounds necrosis and wound drain removal under local perianal block.

by low velocity injury. Diverting colostomy has been demonstrated safe and effective in reducing the infection rate associated with rectal trauma and a valid tool to perform rectal wash-out. Timing for wound debridement depends on the physiologic condition of the individual patients not having shock or hemodynamic instability. If patients have high risk of infection, placing drain are recommended. When a stabbed patient presents gross rectal bleeding and hematuria, which are strong indicators of colorectal and bladder injuries, proctoscopy and cystogram should be performed. To diagnose the bladder injury, it's mandatory to perform a retrograde static cystogram or a CT cystography.(6) The perineal injury and laceration are mostly reported at delivery, and fecal diversion is recommended as a treatment method when developing into rectal fistula(7) The perianal laceration is rare and mostly reported in the sexual abuse of the infant, and the fecal diversion is considered when the anus or rectum is included in the impairment(8) Recently, options for treatment of various lacerations and dirty wounds such as negative pressure wound treatment have been proposed.(9) Although this case is hard to conclude, I think it would be desirable to try not to use diverting if it is not a wound penetrating the rectum and anus, but a healthy patient without underlying disease and risk factors for wound infection.

#### IV. Conclusion

Blunt and penetrating injuries to the rectum and anus are uncommon, but often have severe associated injuries. Attention to life-threatening injuries and stabilization is the first priority. The management of perineal injuries should be individualized according to the

clinical status and severity of injury. In the absence of shock, associated injuries, or gross fecal soiling, primary colostomy, presacral drainage, and broad spectrum peri-operative antibiotics are considered as treatment of choice. However, if there is no underlying disease or risk factors for wound infection, a primary suture can be attempted while maintaining only the wound drainage.

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