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Case Report

Anorectal avulsion-an unusual anorectal trauma

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ABSTRACT

Anorectal avulsion is a rare trauma. In this type of lesion, the anus and the sphincter complex are pulled up by a tremendous compression of the pelvic floor. Frequently, this trauma is associated with other injured organs, like pelvic bones or urethra. We report a case of a young man who was admitted with a total anorectal avulsion associated with a pelvic fracture. A multidisciplinary treatment included external fixation of the broken pelvis, suprapubic cystostomy, sigmoid loop colostomy and reimplanting the anal complex in the original position with appropriate drainage. Anorectal injuries are uncommon and represent about less than 10% of rectal trauma, but anorectal avulsion is extremely rare. These cases often require a quick decision making and multidisciplinary approaches to reduce the possibilities of morbidity and mortality.

Keywords: Anorectal trauma, Anorectal avulsion

INTRODUCTION

Complex anorectal traumatic wounds are rare. In anorectal avulsion the anus and the sphincter complex are pulled up by a tremendous compression of the pelvic floor. The existing literature on the subject recommends the surgical approach with diverting loop colostomy, debridement of devitalized tissue, repair of the anorectal and sphincter defects with primary suture.[1,2] In the event of complex pelvic fracture, it is recommended a pelvic stabilization with external fixation.[3] Although rare, these cases are associated with a high mortality rate and complications, and the management of colorectal trauma remains a controversial topic. We report a case of an anal avulsion associated with a traumatic complex pelvic fracture and the management and related complications.

CASE REPORT

A man in his 40s was admitted to the emergency room after suffering a car crash resulting in blunt abdominal trauma associated with a complex pelvic fracture and a massive destruction of the perineal region, with complex anorectal avulsion. The accident mechanism was that he was impaled on a blunt hard surface. At the admission the patient was conscious and hemodynamically stable. The physical examination revealed a pulse rate of 80 beat per minute, a blood pressure of 110/80 mmHg, but there was no fever. Abdominal examination showed tenderness in the hypogastria.

Urologic examination revealed urethral bleeding. The perineal exam showed an anorectal complex disinserted of the cutaneous and subcutaneous tissue and loss of the perineal attachments and retracted. So, being hemodynamic stable, the patient underwent total body CT scan showing a pelvic trauma with bilateral ischio pubic fracture and pubic symphysis disruption (Figure 1). There was free air in the perineal zone and around the rectal space. There were no signs of free abdominal fluid or free abdominal air. The patient was taken to the operating room and a suprapubic cystostomy was performed. On the first approach the orthopedic team fixed the broken pelvis with an external fixation. Afterwards, the general

surgery team performed a sigmoid loop colostomy and proceeded with a perineal approach. The perineum was treated by debridement, the anorectal stump was individualized and retracted to perineal skin and the external sphincter was identified and sutured (Figure 2, 3). Presacral drainage was placed in both ischio rectal areas using two passive drains (Figure 4). The patient was admitted at the intensive care unit and was given large spectrum antibiotic. Postoperatively the patient had no major complications and he was discharged after 14 days.

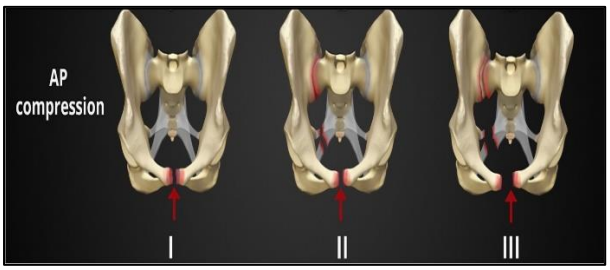

Figure 1: Diagram with the mechanism of injury, showing an anteroposterior compression that result in ischio pubic fracture and pubic symphysis disruption.

Figure 2: Inspection of the perineum showing a big loss of substance with complete avulsion of anorectal complex.

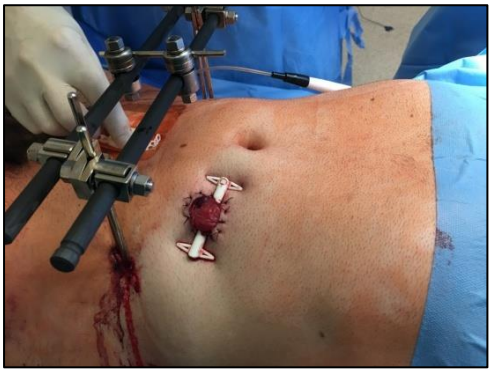

Figure 3: External pelvic fixator and sigmoid loop colostomy.

Figure 4: Reimplantation of the anal with presacral drainage placed in both ischio rectal areas using two passive drains.

RESULTS

To evaluate the risk of fecal disorder, we performed an anorectal manometry showing a normal anocutaneous reflex and straining pressure. Digital rectal exam didn't show significant anal sphincter tone loss of function. Colostomy was closed without significant complications. Seen at short term follow-up, no fecal incontinence or defecatory disorders. Commonest site for metastasis was regional lymph node. 8 patients had secondary deposits in liver, 2 were having deposit in anterior abdominal wall and two females were having secondary deposits in both ovaries.

DISCUSSION

We report a case of a young man admitted with a severe perineal wound and anorectal injury and managed by a multidisciplinary team, with orthopedic surgeons, urologists, and general surgeons. This type of trauma is rare, and few reports are available. In addition, the treatment is not easy.

The etiopathology is explained by a disrupting effect of the huge energy in the connective tissue while the pelvic muscles and sphincters are contracted tensely with tremendous compression of pelvic floor. The standard of care for the treatment of extraperitoneal rectal injuries has included diverting loop colostomy since World war II. In patients in stable condition, with minimal contamination or extraperitoneal lesions, and without major associated injuries, the treatment should be a primary repair. This would avoid the colostomy. The most serious complications are infections, abscesses, and sepsis, which can lead to death.

Regarding presacral drainage, the only randomized study concluded that drainage of penetrating rectal injuries has no effect on infectious complications associated with the rectal injuries.[4-7] In the long-term, sphincter insufficiency is another serious complication. Anorectal injuries are

uncommon and represent about less than 10% of rectal trauma, but anorectal avulsion is extremely rare. As a result, there are very few case reports available in literature.[8-10] These cases often require a quick decision making and multidisciplinary approach to reduce the possibilities of morbidity and mortality.

CONCLUSION

Anorectal injuries represent less than 10% of rectal trauma and anorectal avulsion is rare. A quick decision making, and multidisciplinary approach is important to reduce the morbidity and mortality. Any effort for anal reconstruction should be done, if possible, early in the treatment course.

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