

Ileum Perforation after a Single Gluteal Stab Wound

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ABSTRACT

Gluteal stab wounds are uncommon injuries in civilian life, and they are ordinarily treated by primary suturation after local exploration. These wounds seem to be insignificant for this reason, but they may cause morbidity and mortality because the glutea contains pelvic visceral and vascular organs. A quarter of the patient with gluteal stab wounds require surgical operation because of visceral and/or vascular damage. Therefore, further examinations must be performed for gluteal stab wounds. In this case report, it was aimed to emphasize on ileum perforation after a gluteal stab wound in a patient. (JAREM 2015; 5: 125-7)

Keywords: Gluteal region, penetrating wound, ileum perforation

INTRODUCTION

Injuries of the gluteal region are not commonly encountered traumas in emergency departments, and they are often treated by local initiatives in the emergency service (1). As the depth of penetration increases, injuries of the pelvic vascular and/or visceral organs are usually expected, depending on the location of the injury. Rarely, intraabdominal vascular and/or visceral organ injuries may also be observed. A case of ileal perforation developing in the gluteal region after penetrating stab wound is presented in this article.

CASE REPORT

A 34-year-old male was admitted to the emergency service with a complaint of abdominal pain. It was found from the patient's history that he had been beaten and injured with a knife on the left hip about twelve hours previously (Figure 1); he was then assessed under local anesthesia in the emergency service he was admitted to. His fever was 38°C, and there was an incision sutured with approximately 5 cm of skin stapler in the top onethird region of the left gluteus. There was sensitivity in each of the four abdominal quadrants, and defense and rebound were detected. No abnormality was found by rectal examination. Small intestine-type air fluid levels were seen in the X-ray of the abdomen, and free air under the diaphragm was not observed. A reassessment was made because common liquid and free air were seen in the abdomen by intravenous contrast-enhanced computed tomography (CT) (Somatom Emotion, Siemens, Erlangen, Germany); it was considered that the line of injury (Figure 2) could be penetrating the abdomen, and thus, the decision was made to perform laparotomy. The situation was explained to the patient, and informed consent for all possibilities, including ileostomy, was obtained.

During the exploration, approximately 1000 cc of hemorrhagic fluid was found in the abdomen. It was observed that the small intestines were dilated and created a mass in the left lower quadrant. It was seen that the sharp object injury in the left gluteal region passed through the gluteus muscle and entered into the pelvis through the sciatic foramen, and after wounding the meso from the left lateral rectum, the injury caused small intestine perforation 50 cm proximal to the ileocecal valve. The small intestine was primarily repaired by a double-layer procedure. The abdomen was washed with plenty amounts of isotonic fluids. The operation was completed by placing a suction drain in the abdominal left pararectal space. Oral feeding was started following gas discharge on the third postoperative day. The suction drain was removed on the fourth day. The patient, whose general state was fine, was discharged on the sixth postoperative day.

DISCUSSION

Although all body penetrating traumas due to sharp object injuries show differences between countries, they constitute less than 3% of patient traumas (1, 2). In a study performed in our country, this ratio was found to be 1.3% (1). Studies have revealed that most people who are exposed to sharp object injuries are male, and the average age is 29 to 30 (1, 3).

Different conclusions have been reached in the analysis performed to identify the regions where injuries with sharp objects most frequently occur. According to the study performed in our country, while the abdominal region is the most affected, it is followed by the extremities and chest (1). It was reported in a study conducted by Jacob et al. (4) that the most common injured regions were the lower extremities and the head and neck region.

No literature indicating the incidence of gluteal region penetrating injury is available. It is estimated that gluteal region penetrating injuries constitute 2 to 3% of all penetrating traumas (5). In a study by Linkevicius et al. (3) in which 664 cases were examined, including firearms and sharp object gluteal region injuries, vascular and/or visceral organ injuries were identified in about 26.9% of injuries, and laparotomy was performed.



Figure 1. Gluteal injury region



Figure 2. Three-dimensional computed tomography image: (1)- Skin staplers and (2)- the line of sharp object injury (sciatic foramen)

There is no generally accepted method for evaluating gluteal region penetrating injuries. However, a new algorithm was introduced by Lunevicius et al. (6) Control of the femoral pulse and the external urethral meatus, neurological examination of the lower extremities, and examination of the rectum should definitely be performed after general inspection according to this algorithm. If there are shock findings in the patient, damage control surgery or definitive surgery should quickly be performed. If the patient is stable, examination should be continued. In the case of clinical suspicion, rectoscopy/rectosigmoidoscopy should be planned (6). If the bleeding through the skin cannot be brought under control by tamponade, arteriography (Doppler ultrasonography, CT angiography, or invasive angiography) should be planned (7).

The rectum is the most damaged visceral organ in gluteal stab wound injury (19%); however, in an analysis by Luvenicius and Schulte (3) in which 158 patients were evaluated, small intestine damage was identified at a rate of 2.5%. In a study where they evaluated 39 gluteal stab injury cases, Susmallian et al. (5) found ileal perforation in one patient. Mercer et al. (8) argued in their research that the injured gluteus quadrant and penetration depth are the most important criteria that determine the severity of the injury. Mercer et al. (8) divided the gluteal region into two quadrants, upper and lower, in reference to the greater trochanter; if the injury region is above the trochanter majus and the injury line is toward the cranium, the vascular and visceral injury rate is high. Because the injury in our patient was above the trochanter majus and the injury line was toward the cranium, as Mercer et al. (8) stated, it was an injury carrying a high risk of visceral damage. The diagnosis was made from the clinical suspicion (abdomen findings and fever) and with contrast-enhanced CT. The patient, who underwent a normal healing process, was sent home on the sixth day after the operation.

CONCLUSION

It is possible that visceral damage in gluteal region stab wound may not be determined despite local exploration. For this reason, when assessing non-superficial sharp object injuries, further examination should definitely be considered, and the patient should be hospitalized and kept under observation if needed.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

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