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Case Report

Perineal impalement injury by steel bar — A near miss

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ABSTRACT

Adult perianal impalement injuries are uncommon but can carry high morbidity and mortality. We report a case of a penetrating perineal trauma in a construction worker highlighting an innovative use of a Sengstaken tube to control his pelvic bleeding, as well as the operative management of his sphincteric injury. This article illustrates principles of effective acute care and discusses a diagnostic approach to evaluating a potentially complex injury, as well as the decision-making process with regard to fecal diversion and choice of sphincteric repair.

Introduction

Adult perineal impalement injuries are uncommon and notorious for their complex injury patterns and risk of massive pelvic bleeding. We herein describe an innovative use of balloon tamponade to achieve haemostasis of pelvic bleeding in a patient with perianal impalement injury and the challenges in his subsequent management.

Case report

A 35 year-old construction worker fell off a ladder and was impaled by reinforcement bars through the perineum. He self-extricated the metal rods with resultant evisceration of small bowel through the perianal defect (Fig. 1).

He initially presented to an outpatient facility in hypotensive shock and was immediately resuscitated according to Advance Trauma Life Support protocols. Laparotomy with exploration of the retroperitoneum

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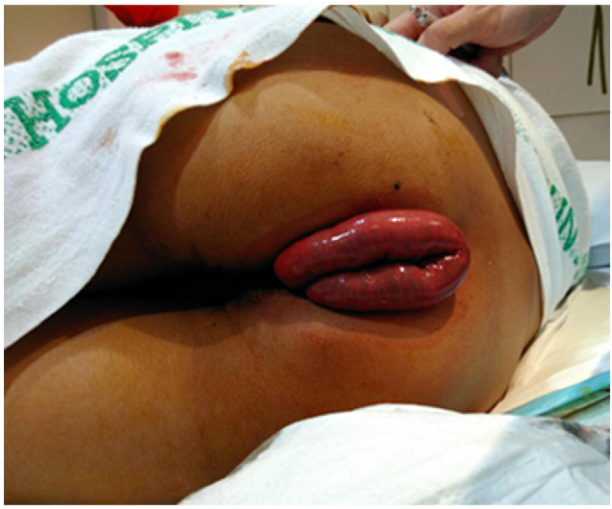

Fig. 1. Herniation of bowel through perineal defect.

was performed revealing injuries extending from the perineum to the inferior pole of the right kidney as delineated in the schema above (Fig. 2). Of note, a 4 cm perineal defect at the 7 o'clock position with a breach of the pelvic floor muscles and laceration of a branch of the right internal iliac vein were noted. The vein was repaired and the abdomen packed. Damage control resuscitation was ongoing.

Post-surgery, the abdominal drains continued to drain blood and the patient was brought back to the operating theatre (OT) for re-exploration; persistent ooze was noted from the pelvic floor. As the latter was too wide for the Foley's catheter to provide sufficient tamponade for haemostasis, a Sengstaken Blackmore (SB) tube was inserted through the perineal defect. The gastric balloon was inflated with 170 ml of saline and tension was applied to the SB tube as shown in Figs. 3–5, to tamponade the pelvic bleeding.

The abdomen was closed temporarily and patient was brought to the surgical intensive care unit. A total of 13 units of PCT, 9 units of FFP, 12 units of platelets, 1 L cryoprecipitate were administered and the patient was transferred to a tertiary trauma centre for further management.

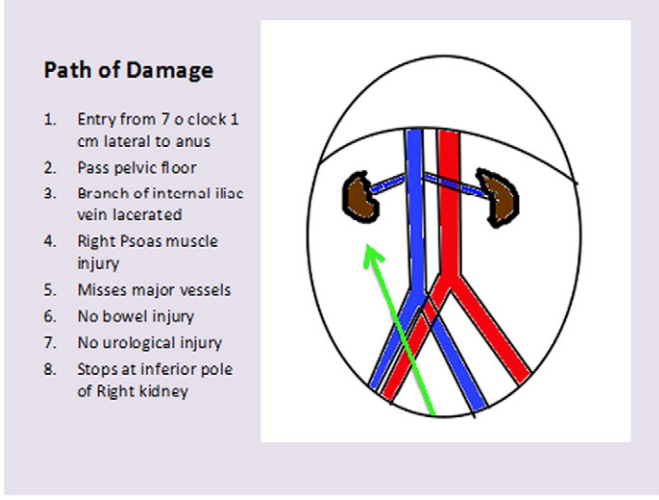

Fig. 2. Trajectory of steel bar penetrating into retroperitoneum.