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Delayed Post-Traumatic Small Bowel Obstruction and Perforation

Case Report

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Abstract

Background: Blunt abdominal trauma with no signs of shock and peritonitis may be treated conservatively. Rarely, such patients may later present with features of small bowel obstruction. This is a rare case report of delayed small bowel perforation that presented primarily with such features.

Case presentation: A 55-year-old male patient presented having suffered a motorcycle accident ten days earlier. Immediate post-traumatic clinical and laboratory examination had only detected a left ulnar fracture. During the following days, the patient experienced worsening of abdominal pain and was readmitted to the emergency department. Physical examination revealed abdominal distension and tenderness. Abdominal computed tomography (CT) identified a small bowel obstruction and a large intra-abdominal collection with air-fluid level. An emergency laparotomy was performed which disclosed an abscess behind the anterior abdominal wall and a small bowel perforation at the proximal ileum. No other intrabdominal injury was noted. Enterectomy at the site of perforation was decided. The patient had an uneventful recovery and was discharged on the ninth post operative day.

Conclusion: Delayed small bowel obstruction with concurrent peritonitis after blunt abdominal trauma requires a high level of clinical suspicion, in order to diagnose and appropriately manage these rare post-traumatic injuries.

Keywords

Blunt abdominal trauma, Bowel perforation, Post-traumatic ileus

Introduction

Blunt abdominal trauma producing intraperitoneal injury usually presents acutely, necessitating laparotomy due to intestinal perforation or mesenteric vascular injury [1]. In the absence of shock and peritonitis, patients with blunt abdominal injury may be treated conservatively. Rarely, such patients can later present with features of small bowel obstruction and perforation [2,3]. Three possible causes have been described. Subclinical small bowel perforation, localized bowel ischaemia, and mesenteric vascular injury [4]. This is a rare case report of delayed small bowel perforation that presented primarily with features of small bowel obstruction.

Case presentation

A 55 year-old-male patient presented having suffered a motorcycle accident ten days earlier. The mechanism of injury was sudden deceleration that resulted in blunt traumatic abdominal injury. Immediate post-traumatic clinical and laboratory examination had only identified a left ulnar fracture and an external splint was placed. During the following days, the patient experienced worsening of abdominal pain, abdominal distension and vomiting and was therefore readmitted to the emergency department. Physical examination revealed a 37,1C^0 temperature, 135/80 mmHg blood pressure and 24/min breath rate. The patient had abdominal distension and tenderness with increased bowel sounds. A naso-gastric catheter drained approximately 1200 ml of enteric fluid. An abdominal x-ray showed a small bowel ileus with multiple air-liquid levels. An abdominal ultrasound was not diagnostic but an abdominal computed tomography (CT) demonstrated a small bowel obstruction and a large intra-abdominal collection with air-fluid level, localized directly behind the anterior abdominal wall (Fig. 1). An emergency laparotomy was performed which identified an abscess behind the anterior abdominal wall. Further exploration revealed small bowel perforation at the proximal ileum. No other intrabdominal injury was noted. Enterectomy of the site of perforation was performed with an end-to-end anastomosis. The pathology report confirmed localized ischemic enteritis and perforation. The patient had an uneventful recovery and was discharged on the ninth post operative day.

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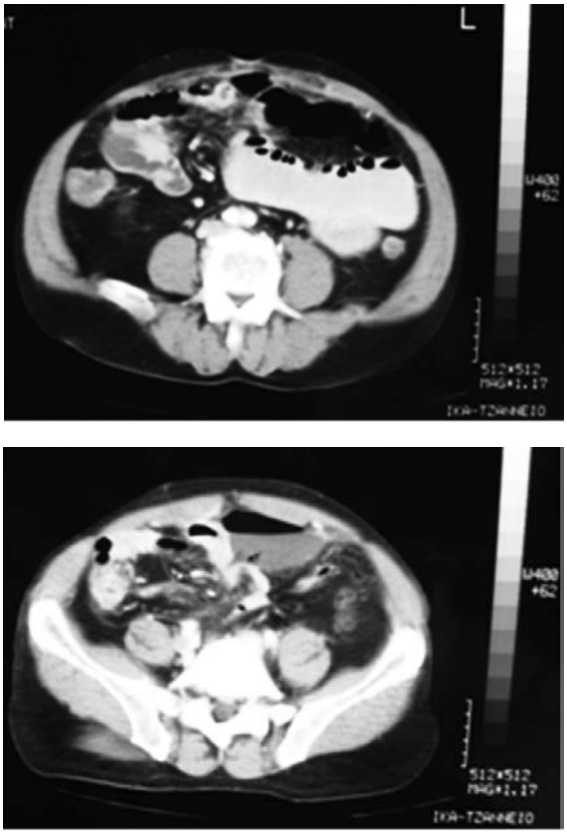

Fig. 1a, b Abdominal CT scan demonstrating small bowel obstruction (a) and an abdominal abscess located behind the anterior abdominal wall (b).

Discussion

Delayed small bowel obstruction after blunt abdominal trauma is a rare clinical entity, with only a few cases described in the literature [5]. Intestinal stenosis can be the result of a small subclinical perforation that may seal spontaneously producing a stricture due to scar formation [6]. It is thought that the fixed portions of the small bowel, namely, the terminal ileum and proximal jejunum, are prone to perforation during blunt abdominal trauma. In our case report, however, a bowel perforation was evident at the proximal ileum. It seems that the primary event was localized bowel ischaemia, possibly due to a mesenteric vasculature insult. This is in accordance with the findings of the pathology report. Thus, bowel perforation was secondary to ischaemia.

Several case reports describe the same mechanism of delayed small bowel obstruction as a result of bowel ischaemia [7-10]. Ischaemic complications include ulcer formation, fibrosis and ultimately, stricture [11]. However, bowel ischaemia may lead also to bowel perforation. In our case, the primary symptoms where that of small bowel obstruction, while subsequent perforation was suspected due to signs of localized peritonitis and abdominal tenderness.

Conclusion

Delayed small bowel obstruction with concurrent peritonitis after blunt abdominal trauma requires a high level of clinical suspicion, in order to diagnose and appropriately manage these rare post-traumatic injuries.

Conflict of interest

The authors declare that they have no conflict of interest.

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Όψιμη Μετατραυματική Απόφραξη και Διάτρηση Λεπτού Εντέρου

Ενδιαφέρουσα Περίπτωση

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Περίληψη

Εισαγωγή: Οι ασθενείς με κλειστές κακώσεις κοιλίας που δεν εκδηλώνουν αιμοδυναμική αστάθεια ή σημεία περιτονίτιδας, δύνανται να αντιμετωπισθούν συντηρητικά. Σε ορισμένες περιπτώσεις, αυτοί οι ασθενείς μπορεί να εκδηλώσουν όψιμα, εικόνα εντερικής απόφραξης και ειλεού. Στην παρούσα εργασία περιγράφεται ένας πολυτραυματίας με όψιμη εκδήλωση απόφραξης και διάτρησης λεπτού εντέρου.

Παρουσίαση περιστατικού: Ένας άνδρας 55 ετών είχε τροχαίο ατύχημα πριν από 10 ημέρες. Ως οδηγός δικύκλου, συνεπεία απότομης επιβράδυνσης, υπέστη πλήξη με το τιμόνι στη κοιλιακή χώρα. Άμεσα υποβλήθηκε σε κλινικό και εργαστηριακό έλεγχο, που ανέδειξε μόνο ένα κάταγμα αριστερής ωλένης. Τις επόμενες ημέρες, ο ασθενής παρουσίασε προοδευτικά επιδεινούμενο κοιλιακό άλγος και εμέτους. Στη φυσική εξέταση, διαπιστώθηκε κοιλιακός μετεωρισμός και έντονη ευαισθησία. Η αξονική τομογραφία κοιλίας ανέδειξε απόφραξη λεπτού εντέρου, καθώς και μια εντοπισμένη ενδοκοιλιακή συλλογή, όπισθεν του προσθίου κοιλιακού τοιχώματος. Ακολούθησε επείγουσα λαπαροτομία όπου παροχετεύτηκε ένα απόστημα όπισθεν του προσθίου κοιλιακού τοιχώματος. Επίσης, διαπιστώθηκε ρήξη του εγγύς ειλεού με συνοδό εντερική απόφραξη, όπου και έγινε εντερεκτομή και αναστόμωση. Καμία άλλη ενδοκοιλιακή κάκωση δεν αναγνωρίσθηκε. Ο ασθενής είχε ομαλή μετεγχειρητική πορεία και έλαβε εξιτήριο την ένατη ημέρα.

Συμπέρασμα: οι κλειστές κακώσεις κοιλίας απαιτούν υψηλό δείκτη κλινικής υποψίας και προσεκτική παρακολούθηση, καθώς είναι δυνατό να εκδηλωθούν όψιμα σημεία εντερικής απόφραξης και ενδοκοιλιακής λοίμωξης.

Λέξεις Κλειδιά

Κλειστή κάκωση κοιλίας, Διάτρηση εντέρου, Μετατραυματικός ειλεός

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