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Research Article

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Delayed Small Bowel and Mesenteric Injuries After A Road Traffic Accident

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Introduction

Delayed bowel and mesenteric injuries are common after a blunt abdominal trauma (BAT) especially involving a road traffic accident. It occurs about 1%-5% and involving the intra-abdominal organs mainly the solid organs such as liver, spleen and kidneys. Missed or delayed diagnosis is multifactorial. Symptoms may be absent on initial presentation and when present maybe non-specific. On top of that, clinical assessment of some patients may not be reliable in the presence of collateral injuries.

Methods

Due to the acceleration and deceleration forces during the trauma, the small bowels and its mesentery may torn apart. Although it might not happen immediately, these group of patients may be a transient responder towards the initial fluid resuscitations and later after decompensation occurred, their systems will be collapsed. It is postulated that there are three ways in which a small bowel and mesenteric injuries occurred, the first one due to direct crushing force, second is due to shearing force, and lastly due to a sudden increase in the intraluminal pressure that results in burst injuries.

Results

In our case, the patient was a teen in his 20's and he had a high impact motorbike accident. At the ED he was responding well to the fluid resuscitation while the initial FAST scan showed positive for free fluids in the pelvic region. Clinically his abdomen was peritonitis with a 'board-like' rigidity and after 1 hour of resuscitation, his vitals started to dropped. We pushed him straight to the OT and operated on him and we found a long segment of small bowel ischemia with a mesenteric injury. We attempted to revive the dying bowels with 100% oxygen for 15minutes but unfortunately it was unsuccessful. We decided for a small bowel resection and primary anastomosis. He was then nursed in the surgical HDU.

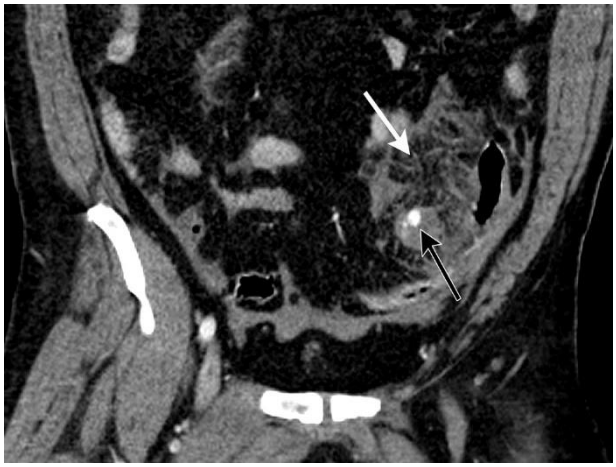

Figure 1: Active mesenteric haemorrhage.

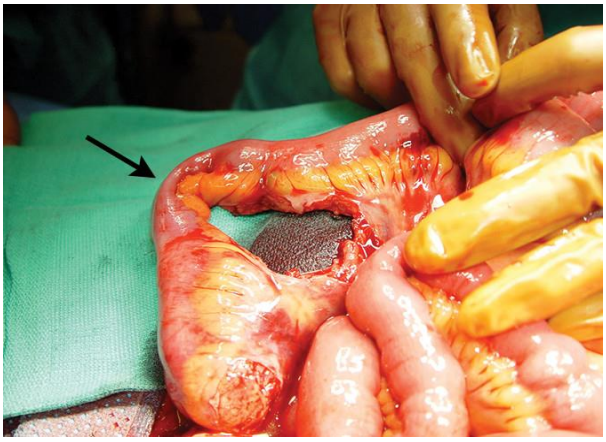

Figure 2: Bucket handle intestinal injury post MVA.

Discussion

Although the teen was responding to the fluids, a high level of suspicion should be kept in mind about delayed bowel and mesenteric injuries especially in a blunt trauma. Other modalities that we could have tried were DPL and the Gold standard is a CT scan. Unfortunately, for this teen, we have to rush him to the OT to save his life. The occurrence of the rare instances of isolated small bowel perforation following BAT is explained as a blow-out perforation at the anti-mesenteric site due to a sudden increase in intraluminal pressure

Conclusion

Clinicians and surgeons should have a high level of suspicion especially when dealing with a post traumatic patient with a blunt abdominal trauma (BAT). Failed to early diagnose such cases may increase the morbidity and mortality of the patient.

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