DELAYED PRESENTATION OF BUCKET HANDLE INJURY AND MORELL-LAVALLE LESION AFTER BLUNT ABDOMINAL TRAUMA

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INTRODUCTION

- Although blunt abdominal traumas are common, abdominal Morell-Lavallee lesions are a rare occurrence, especially simultaneously with a bucket handle injury.
- Both injuries can be difficult to diagnose early and can be missed during the initial evaluation.
- This case highlights an unusual delayed presentation to emphasize vigilance in evaluating blunt abdominal trauma.

CASE PRESENTATION

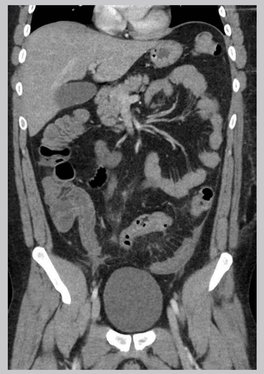
- Patient: 31-year-old male with no PMH, s/p ped struck while riding electric scooter, -HT, -LOC, -AC, VSS, GCS 15.
- Physical exam: right lower extremity deformity, left elbow wound, superficial abdominal abrasions and no other external signs of injury or complaints.

IMAGING & HOSPITAL COURSE

- **CT abdomen/pelvis:**
  - Small volume of intraperitoneal fluid near the sigmoid colon consistent with blood products without definite intra-abdominal injury.
  - On hospital day 4, he reported increasing left abdominal pain with persistent tachycardia and leukocytosis.
- **Repeat CT abdomen/pelvis:**
  - Diffuse circumferential wall thickening of the ileum and infiltrative changes of the adjacent mesentery, concerning for ischemic etiology.

MANAGEMENT & OUTCOME

- **Procedure:**
  - Underwent diagnostic laparoscopy converted laparotomy
- **Findings:**
  - Hemoperitoneum and small bowel mesenteric avulsion injury, prompting conversion to exploratory laparotomy.
  - A large abdominal wall Morell-Lavallee lesion superior to the umbilicus, extending to the left flank.
- **Intervention:**
  - 20cm of ischemic small bowel 10cm proximal to the ileocolic vein secondary to a large bucket handle mesenteric injury was identified prompting a small bowel resection with primary anastomosis.
  - Abdominal wall debridement, placement of negative pressure therapy, counter incision of left lateral abdominal wall with subsequent wound closure on hospital day 9.



DISCUSSION

- This case represents an atypical delayed diagnosis of concomitant Morell-Lavalee lesions with small bowel mesenteric mesenteric avulsion bucket handle injury.
- Benign abdominal exams and hemodynamic stability can provide false reassurance in the setting of blunt abdominal trauma, complicating and delaying diagnosis of these injuries.
- CT is useful for initial detection, and delayed repeat CT scan can improve more timely diagnosis even in subclinical cases.

CONCLUSION

- Commonly seen after motor vehicle accidents, Morell-Lavalee injuries are most frequently seen in trauma in the thigh, greater trochanteric and lumbar regions.
- While these injuries can be managed both operatively and non-operatively, simultaneous presentation with bucket handle injury requires immediate surgical intervention.

REFERENCES

1. Bouchard MD, Pow C, Gilbert J, Slawaska-Eng D, Vivekanantha P, Fageeh R, Yan J. Characteristics, Patterns and Optimal Treatment Strategies of Morel-Lavallee Lesions: A Systematic Review. J Orthop Trauma. 2025 May 6. doi: 10.1097/BOT.0000000000003005. Epub ahead of print. PMID: 40333732.
2. Shaban Y, Elkbuli A, Ovakimyan V, Hai S, McKenney M, Boneva D. The First Reported Case of Morel-Lavallée Lesion and Traumatic Abdominal Wall Hernia: A Case Report and Review of the Literature. Am J Case Rep. 2019 Oct 10;20:1492-1496. doi: 10.12659/AJCR.918223. PMID: 31597909; PMCID: PMC6796193.
3. Dallaudière B, Desportes E, Pommier R, Clark A, Loriaut P, Serfaty JM. Seat belt Morel-Lavallée seroma. Diagn Interv Imaging. 2016 Feb;97(2):257-8. doi: 10.1016/j.diii.2015.06.015. Epub 2015 Aug 15. PMID: 26282050.