East Metropolitan Health Service

Royal Perth Hospital

Issue #19

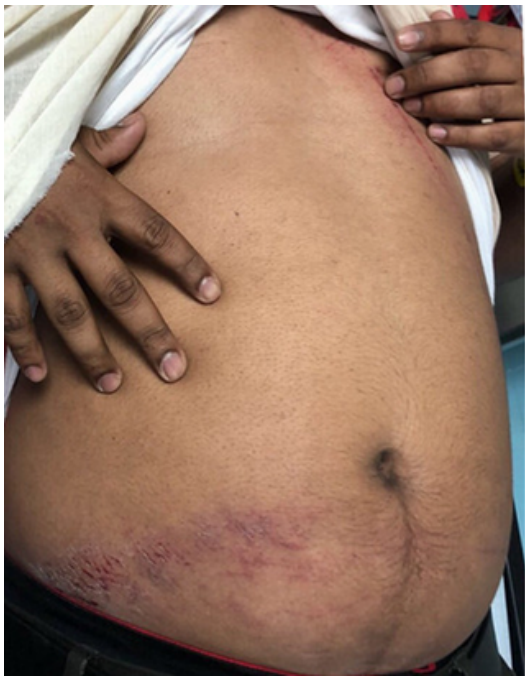
The Trauma Bulletin

Missed Injury?! But they had a CT!

Issue nineteen

STATE ADULT TRAUMA SERVICE
WESTERN AUSTRALIA

Case summary



A middle-aged man presents here after a high speed motor vehicle crash. His car impacted a tree, and he was the restrained driver.

He actually looks pretty well in ED, but has ‘seat belt sign’ which we all recognize as indicating the potential for significant intraabdominal injuries.

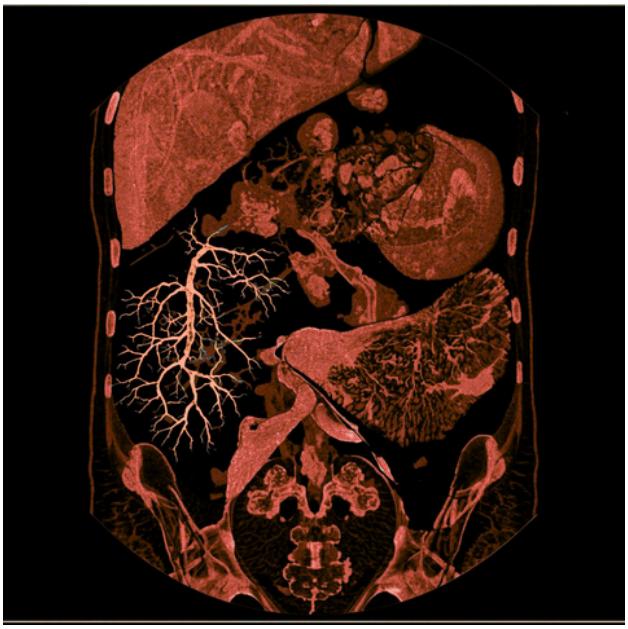
His only past history is of adhesive bowel disease following previous surgery (great surgeon, you can barely see the scars!)

Our patient DOES have pain, but not excessively, and he is definitely not guarded.

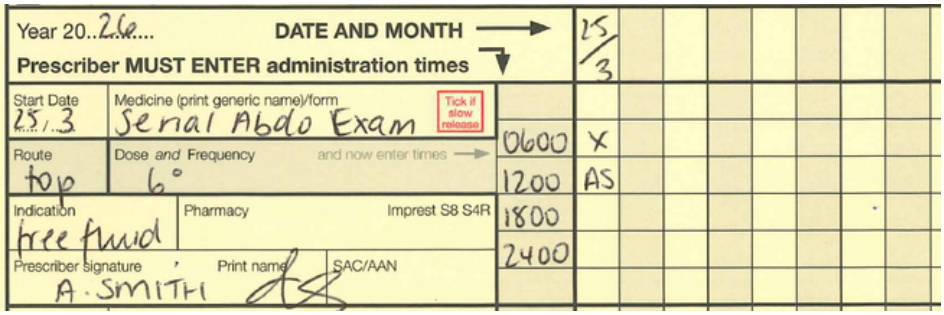
A decision is made by the thoughtful Fellow to CT the abdomen.

She quizzes the RMO about the kind of injuries that we might expect and receives the satisfactory response that there may be associated solid organ injury, but also of bowel and mesenteric injury.

The CT is not entirely normal, with some free fluid and some evidence of adhesive disease, but no definitive injury is detected.



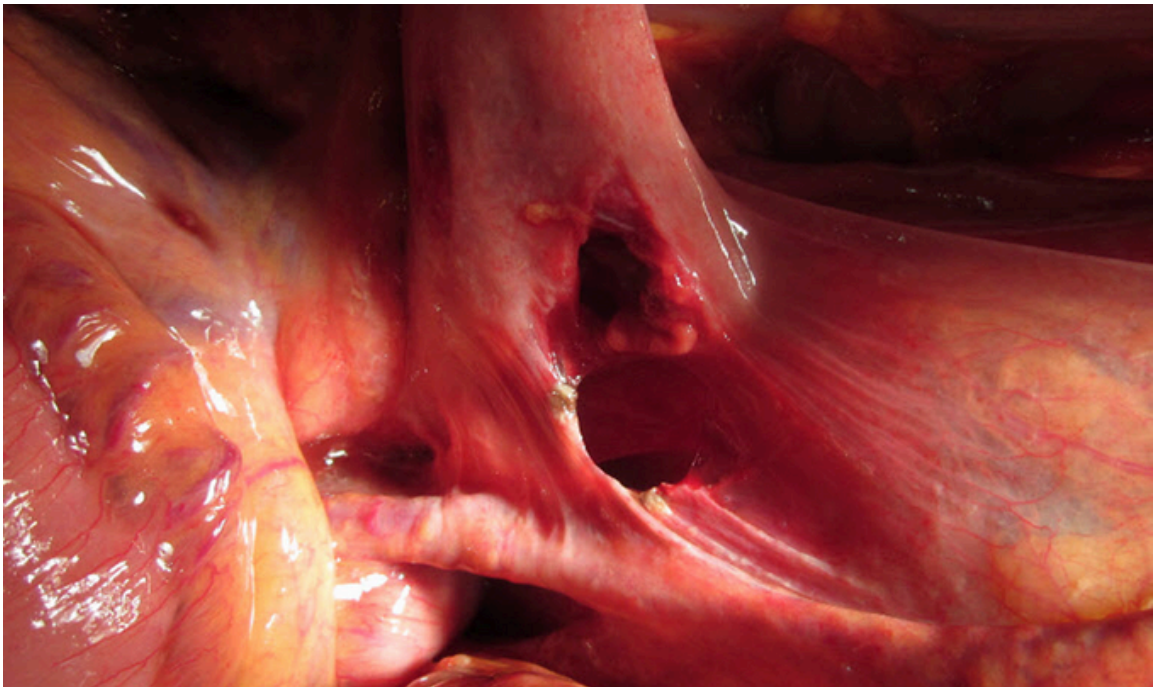
Serial Abdominal Exams


Year 20..26.... DATE AND MONTH → 15/3
Prescriber MUST ENTER administration times ↓
Start Date 25/3 | Medicine (print generic name)/form: Serial Abdo Exam | Tick if slow release
Route: top | Dose and Frequency: 6° | and now enter times →
0600 X
1200 AS
1800
2400
Indication: free fluid | Pharmacy | Imprest S8 S4R
Prescriber signature | Print name: A. SMITH | SAC/AAN

As is normal practice, the patient is admitted for serial examination and observation, but does NOT do well.

Over the course of several days, his abdominal pain gets worse, his respiratory rate and pulse rate climb, he develops a fever, and his CRP also goes up. Serial abdominal examination also shows decreased bowel sounds, increased distension, and ultimately, guarding and is consistent with peritonitis.

On day 3, he goes to theatre, where generalised peritonitis and a small bowel perforation are diagnosed. This is repaired.



This imaginary patient represents a challenge we still face, even in the era of high-quality CT scanners and excellent radiologists. CT's still miss some traumatic pathology and topping the list are bowel and mesenteric injuries

Sometimes imaging is entirely normal in the first instance, but some scans may show indirect evidence of injury (free fluid)

Evidence of adhesions increases the risk of bowel injury

Take home messages

1 Respect the seatbelt sign

2 Accept that a missed injury on initial CT is NOT a never event

3 History of Adhesive disease increases risk of bowel injury

4 Some patients need old fashioned admission and serial examination to really be sure

REFERENCES.
THE AMERICAN JOURNAL OF SURGERY
VOLUME 218, ISSUE 2, AUGUST 2019, PAGES 266-270