

Case	(261) Isolated duodenal perforation due to blunt abdominal trauma
Authors	N. Egea, A. Pedrerol, I. Juanico, J. Farelo, J. Gonzalez, J. Moreno.
Centre	Hospital Universitari Mútua De Terrassa.

CASE PRESENTATION

18 year-old male patient involved in a motor vehicle injury. Body CT was performed at arrival showing small amount of free abdominal fluid in contact with right psoas muscle, no other significant findings were noted.

Given clinical and laboratory stability, conservative treatment was decided. 24 hours after injury, the patient showed severe abdominal pain, fever and leucocytosis.

New abdominal CT was done, showing increased amount of free abdominal fluid and free air located mostly in the retroperitoneal space. Hollow viscus perforation was diagnosed, probably in the second portion of the duodenum due to the most affected area is located immediately below this region. A laparoscopy was performed showing a 1 cm hole in the second part of the duodenum, consistent with CT findings.

DISCUSSION

Duodenal injury after blunt trauma is uncommon but significant event, delays in diagnosis and treatment can significantly increase morbidity and mortality. A high level of suspicion should be maintained in the presence of suggestive clinical findings such as upper abdominal pain and leucocytosis.

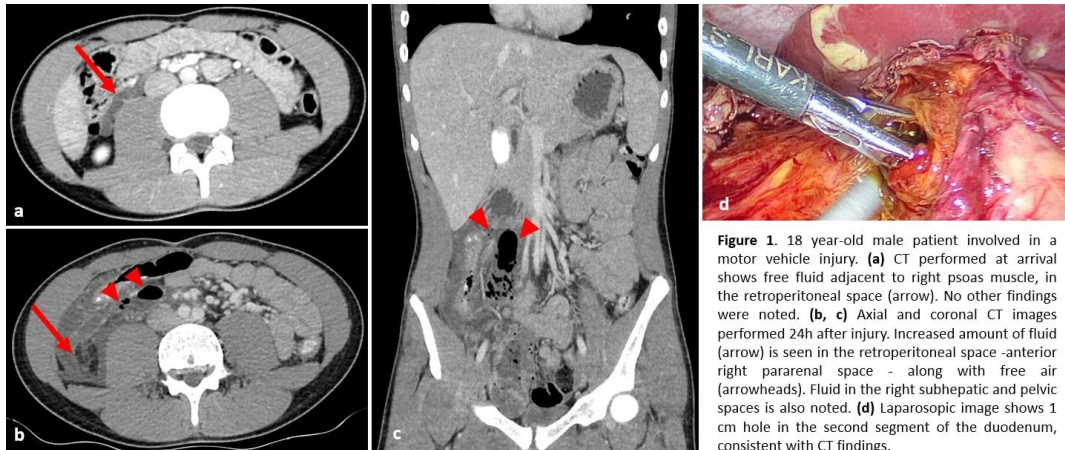
CT is an essential tool in the diagnosis and management of duodenal lesions. It is crucial to differentiate between duodenal contusion and perforation because the latter is indication for surgical treatment.

Duodenal contusion is suspected with oedema or hematoma of the duodenal wall, intramural gas accumulations, and focal duodenal wall thickening (>4 mm).

Perforation is most likely to be detected in the descending and horizontal segments; it should be suspected if there is a retroperitoneal collection of contrast medium, extraluminal gas, or a lack of continuity of the duodenal wall. Fluid or a hematoma in the retroperitoneum, stranding of retroperitoneal fatty tissue, or pancreatic transection can be present in both conditions.

CONCLUSION

CT of duodenal injuries is challenging and requires close attention to the subtle signs of injury. Repeated CT should be consider for patients in stable condition when there is suspicion of duodenal injury.



BIBLIOGRAPHY

- Linsenmaier U, Wirth S, Reiser M, Körner M. Diagnosis and Classification of Pancreatic and Duodenal Injuries in Emergency Radiology. *RadioGraphics*. 2008;28:1591-1602.