

# Gall bladder torsion masquerading as appendicitis in a teenage boy

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## Summary

This report describes acute gallbladder torsion in a previously healthy 16-year-old male. The patient presented with acute right-sided abdominal pain in keeping with acute appendicitis and was taken for a diagnostic laparoscopy where an intraoperative diagnosis of gallbladder torsion was made. This case highlights a very rare surgical presentation in an uncommon patient profile. It highlights the benefit of diagnostic laparoscopy in a resource-constrained facility.

**Keywords:** gallbladder, gallbladder torsion, acute abdomen

## Case report

A 16-year-old boy was referred from a peripheral hospital with suspected acute appendicitis. Previously well, he had a two-day history of severe right-sided abdominal pain, progressively worsening nausea and vomiting with associated loss of appetite. He had no history of diarrhoea, urinary tract symptoms or trauma.

On initial examination, he was afebrile, normotensive with a normal pulse rate, but appeared acutely unwell with diffuse right-sided abdominal tenderness, right-sided guarding and peritonism.

The blood results showed normal renal function, a WCC  $10.37 \times 10^9/L$ , haemoglobin 14.8 g/dL, platelets  $274 \times 10^9/L$ , and a normal C-reactive protein 3 mg/L. The patient received fluid resuscitation and broad-spectrum antibiotics. No ultrasound imaging was available after hours, and so, based on a presumptive diagnosis of appendicitis, a diagnostic laparoscopy was performed. At laparoscopy, via the open Hasson technique, a 10 mm camera port was inserted supra umbilically and the abdomen inspected. A normal appendix was visualised with no macroscopic features of inflammation, perforation, or infection. Further inspection revealed a necrotic gallbladder that had twisted on its mesentery (Figure 1). Three additional ports were placed

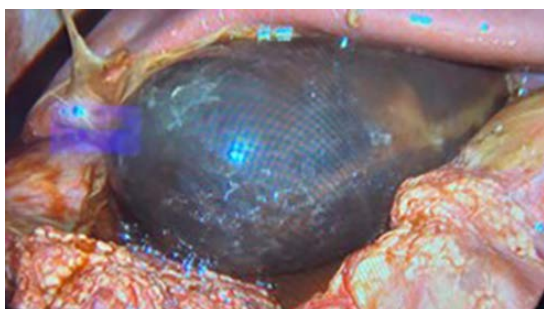


Figure 1: Intraoperative finding of a necrotic gallbladder lying inferior to liver

under direct vision and a laparoscopic cholecystectomy was performed. The gallbladder was sent for histology which showed a haemorrhagic infarction of the gallbladder consistent with gallbladder torsion. The patient had an uncomplicated postoperative course and was discharged two days after surgery in good health.

## Discussion

Gallbladder torsion as a pathology is extremely rare with only 50 documented cases in the last 40 years according to Atahan et al.<sup>1</sup> Furthermore, a systematic review by Reilly et al., which reviewed all reported cases of gallbladder torsion over a one hundred and fourteen year period (1898–2012) and included 500 publications, found the median age of presentation to be 77 years of age as well as a female to male preponderance of 4:1. The same systematic review found only 51 cases of gallbladder torsion in individuals under the age of 18.<sup>2</sup> This case is interesting as teenage boys are the least common patient population to suffer from gallbladder torsion.

The proposed risk factors for gallbladder torsion include an excessively long mesentery of the gallbladder, increased or violent peristalsis of digestive tract, kyphosis, atherosclerosis of the cystic artery and the presence of gallstones as these have been identified in 25–50% of cases.<sup>3–5</sup>

Gallbladder torsion more often occurs as a result of an anatomical abnormality such as a pedunculated gallbladder where the mesentery is elongated and/or widened, predisposing it to torsion.<sup>6–8</sup> Gallbladder torsion typically presents with acute abdominal pain necessitating emergency surgery with the diagnosis usually being made intraoperatively, as was evident in this case.<sup>9</sup>

This patient may have had an anatomical abnormality predisposing him to gallbladder torsion, but he did not have any other risk factors. Diagnostic laparoscopy facilitated the diagnosis and minimally invasive management of this pathology effectively.

## Conclusion

This case offers an example of a rare surgical pathology in an unusual patient population. It highlights the advantage of diagnostic laparoscopy in diagnosing and managing this pathology in a resource-restricted facility.

## Conflict of interest

The authors declare no conflict of interest.

## Consent

We confirm that this patient consented to the above case write-up. All efforts have been made to protect the identity and personal information, and for this reason the patient has not signed this statement. The consent is explicitly stated in the medical records.

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