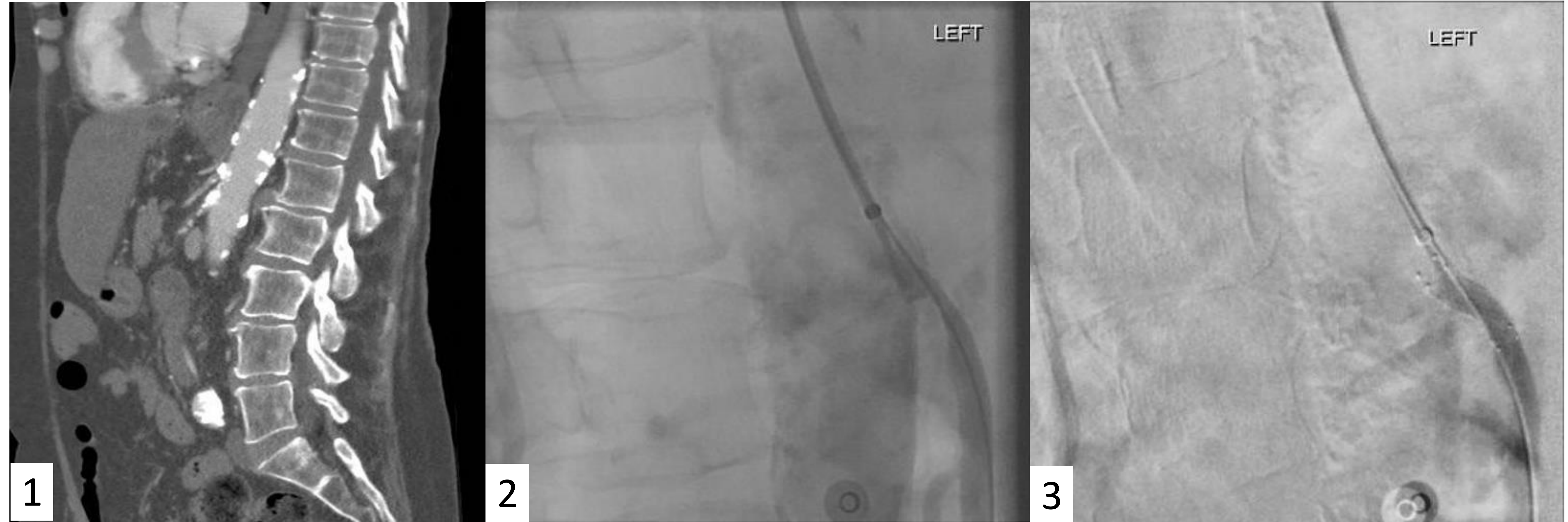


Introduction

- **Acalculous cholecystitis (AC)** is an uncommon form of gallbladder inflammation that occurs in the absence of gallstones.
- It is typically associated with critically ill patients and systemic conditions such as sepsis or trauma.
- AC secondary to **chronic mesenteric ischemia (CMI)** is a rare phenomenon.
- The gallbladder is particularly susceptible to ischemia due to its terminal arterial supply, and reduced perfusion from mesenteric arterial stenosis can predispose patients to AC.
- While the standard treatment for AC often involves percutaneous cholecystostomy or cholecystectomy, the role of **isolated revascularization** in resolving AC remains poorly defined.

Case Presentation

- 77-year-old female with a history of atherosclerotic risk factors who developed RUQ abdominal pain, anorexia, and weight loss.
- Imaging demonstrated findings consistent with AC, in addition to **severe stenosis of the celiac artery and superior mesenteric artery (SMA), suggesting CMI.**
- Laboratory studies revealed leukocytosis and signs of systemic inflammation. Despite being hemodynamically stable, the patient was considered to have worsening acute AC in the setting of CMI.
- A multidisciplinary decision was made to proceed with **endovascular revascularization of the SMA alone**, using balloon angioplasty and stent placement.
- The patient exhibited marked **clinical and biochemical improvement**, including resolution of abdominal pain.
- Follow-up imaging revealed **resolution of gallbladder wall thickening and pericholecystic fluid**, though gallstones and biliary sludge were later noted, possibly due to chronic hypomotility.



Discussion

- This case highlights the potential of treating AC by targeting the **underlying ischemic etiology** rather than the gallbladder itself.
- This is one of the few reported instances where AC resolved solely with **mesenteric revascularization.**
- Given the gallbladder's vulnerability to ischemia in low-flow states, AC may serve as an **early indicator of significant mesenteric vascular disease.**
- This approach avoids the **morbidity** associated with gallbladder interventions and may be particularly advantageous in **elderly or high-risk patients.**

Conclusion

- **AC in the setting of CMI** may be reversible with **endovascular revascularization alone.** Recognition of **mesenteric arterial insufficiency** as an underlying cause of AC can lead to **more targeted** and **less invasive** management strategies.

Figure 1: CT angiogram showing severe stenosis of celiac and superior mesenteric arteries

Figure 2: Diagnostic angiogram of superior mesenteric artery

Figure 3: Angiogram post-stent placement in superior mesenteric artery

References

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