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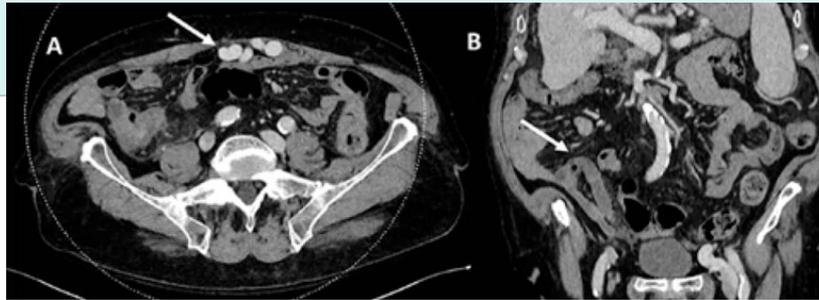
# Hostile appendix



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## Case Description:

A 80 year old with a past medical history notable for liver cirrhosis Child B due to hepatitis C complicated by a hepatocellular carcinoma and ischemic cardiomyopathy presented to the emergency department with progressive lower abdominal pain for 3–4 days. On physical examination the patient is hypotensive (95 / 45 mmHg) and febrile (39.9°C) with a reduced general condition, a diffusely tender abdomen and caput medusae. Blood cultures returned positive for *Streptococcus anginosus*.

Laboratory Values: Hemoglobine 110 g/l, Leucocytes  $2.4 \times 10^9$  /l, CRP 88 mg/l, Albumine 28, Bilirubine 89  $\mu\text{mol/L}$ , INR 1.46.

Computed tomography of the abdomen was performed and shows the images below.

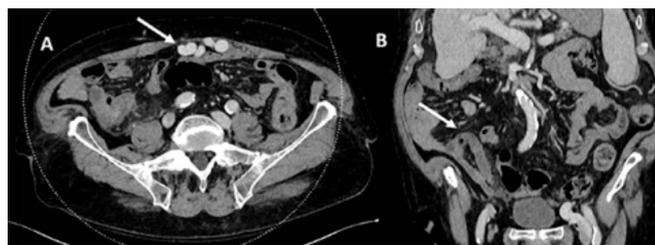


Figure 1. Abdominal CT intravenous contrast agent, venous phase.

## What is the most appropriate treatment?

- Laparoscopic Appendectomy
- Conservative treatment of appendicitis
- Exploratory laparoscopy
- Open appendectomy through McBurney incision
- End of life support with consult to palliative medicine

## Case Solution:

The correct answer is: **Open appendectomy**

This cirrhotic patient presented with a septic shock due to acute appendicitis (Figure 1B, white arrow). The pre-operative CT scan showed prominent umbilical and abdominal varices (Figure 1A, white arrow). After interdisciplinary discussion with the anesthesiologist and to avoid bleeding from the umbilical varices we opted for an open appendectomy through a McBurney incision. Intraoperatively we found a phlegmonous appendicitis, which we resected without any complications. The patient recovered well from the operation and was transferred to the internal medicine ward on post-op day 6. The patient died four months after this operation from complications of his hepatocellular carcinoma unrelated to the appendectomy.

A recent meta-analysis studied complications following appendectomy in patients with liver cirrhosis (Rashid et al, World J Surg, 2022). Not surprisingly, the authors found a higher rate of in-patient mortality in cirrhotic patients (1.7 vs 0.17%). Patients with open appendectomy had a higher rate of surgical site infections with otherwise similar outcomes compared to laparoscopic appendectomy. Non-operative management of cirrhotic patients with acute appendicitis was associated with a higher 30-day mortality (9.5 vs 9.0%) and should be chosen with caution in this specific patient cohort.

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