

CASE IMAGE

Delayed ischemic cholecystitis caused by isolated celiac artery dissection

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A 50-year-old man with hypertension presented to the emergency department with sudden left upper abdominal pain. A contrast-enhanced computed tomography (CT) scan showed extensive dissection from the celiac trunk to the splenic, common hepatic, and gastroduodenal arteries with poor spleen enhancement (Figure 1A–E), leading to the diagnosis of isolated celiac artery dissection and splenic infarction. Despite treatment for pain and blood pressure, he developed a fever and right costal pain on day 3. Blood tests revealed elevated levels of inflammatory markers and liver enzymes. A subsequent CT scan identified cholecystitis, characterized by decrease in the enhancement of the cholecystic artery and further dissection of the right hepatic artery (Figure 1F). Intravenous heparin administration did not improve the cholecystitis (Figure 1G,H), necessitating emergency cholecystectomy on day 5. Pathological examination confirmed extensive gallbladder wall necrosis caused by ischemic changes (Figure 1I). The patient was uneventfully discharged on day 17.

As it can be influenced by anatomical variations,^{1,2} extensive dissection involving branches could result in unsuccessful conservative treatment of isolated celiac artery dissection.^{3,4} Compromised blood flow in the right hepatic

artery, arising from dissection progression and insufficient collateral circulation through the pancreaticoduodenal arcade, could have contributed to the development of delayed cholecystitis.

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None.

CONFLICT OF INTEREST STATEMENT

Authors declare no conflict of interests for this article.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ETHICS STATEMENT

Approval of research protocol: N/A.

Informed consent: Published with written consent of the patient.

Registry and the registration no. of the study/trial: N/A.

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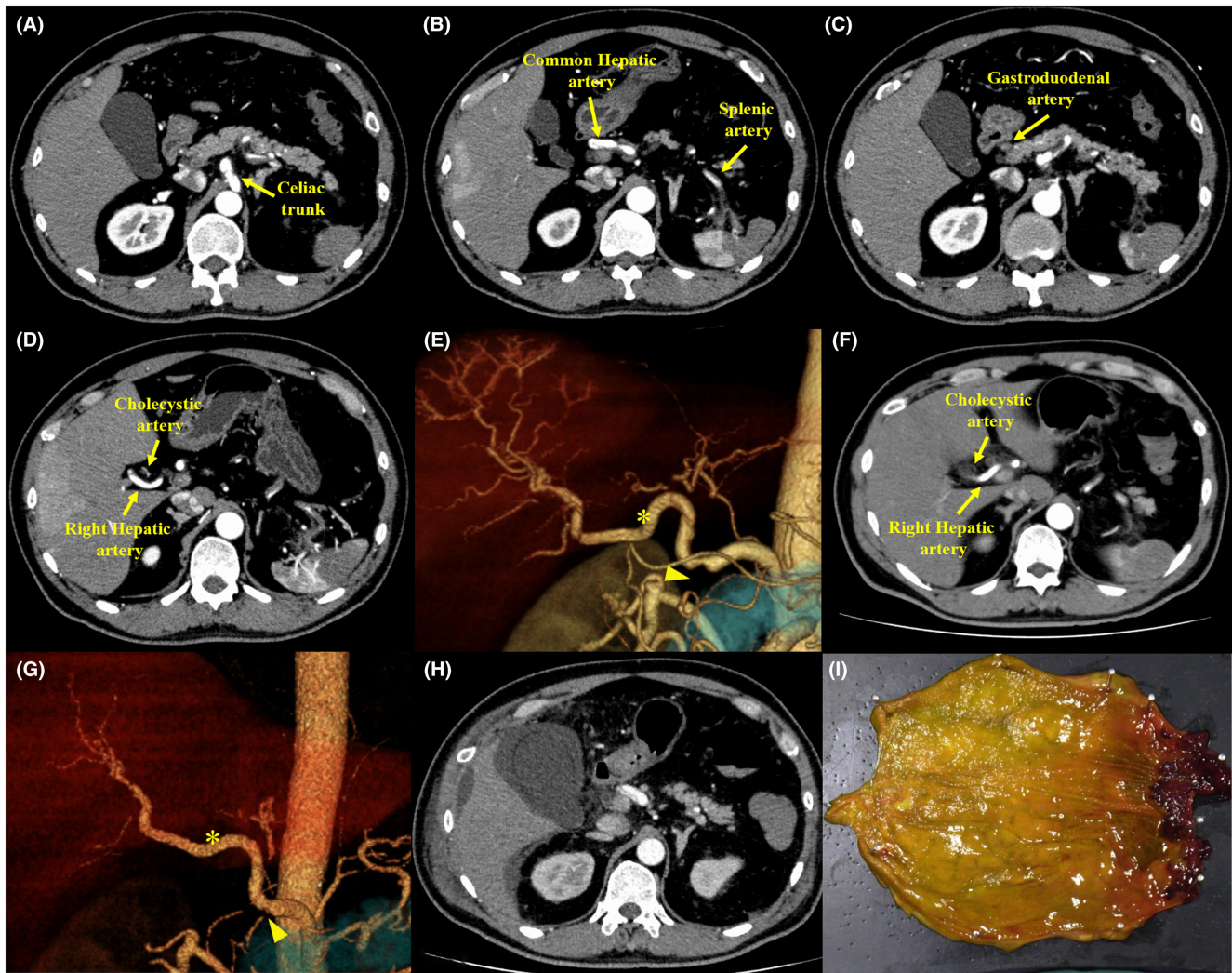


FIGURE 1 (A–D) Contrast-enhanced abdominal computed tomography (CT) scan on admission of a 50-year-old man with isolated celiac artery dissection. The scan shows extensive dissection from the celiac trunk to the splenic, common hepatic, and gastroduodenal arteries, with reduced spleen enhancement. The right hepatic artery and cholecystic artery remain patent. (E) 3D reconstruction of the aorta and branch vessels on admission displaying major patent branches originating from the right hepatic artery (asterisk) and poor opacification of the gastroduodenal artery at the confluence of the common hepatic artery (arrowhead). (F) Contrast-enhanced abdominal CT scan on day 3 revealing a loss of the enhancement effects of the cholecystic artery, whereas the right hepatic artery with progression dissection remains patent. (G) 3D reconstruction of the aorta and branch vessels on day 5 showing poor opacification of major branches from the right hepatic artery (asterisk) and poor opacification of the gastroduodenal artery (arrowhead), indicating compromised blood flow in the right hepatic artery due to the progression of dissection and insufficient collateral circulation through the gastroduodenal artery. (H) Axial image of contrast-enhanced CT on day 5 showing poor gallbladder wall opacification with pericholecystic fluid collection. (I) Pathological examination results revealing extensive gallbladder wall necrosis with marked softening and fragility, confirming ischemic change.

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