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IMAGING VIGNETTE

BEGINNER

CLINICAL VIGNETTE

A Spleen Complication After an Acute Myocardial Infarction

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ABSTRACT

We highlight the potential risk of combined antithrombotic therapy as a rare cause of spontaneous splenic hemorrhage. Conservative management is possible and reintroduction of the antithrombotic therapy is safe after the acute event. (**Level of Difficulty: Beginner.**) (J Am Coll Cardiol Case Rep 2020;2:619-20) © 2020 The Authors. Published by Elsevier on behalf of the American College of Cardiology Foundation. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

A 63-year-old man with history of hypertension, dyslipidemia, diabetes, and atrial fibrillation was admitted in cardiac arrest. The electrocardiogram showed no ST-segment elevation, and high-sensitivity troponin I level was 49,166 ng/l. Emergent coronary angiogram showed critical stenosis of the left anterior descending artery, and successful new-generation drug-eluting stent implantation was performed. Triple antithrombotic therapy (aspirin 100 mg daily, clopidogrel 75 mg once daily, and enoxaparin 80 mg twice daily, according to renal function) was started and maintained during hospital recovery (prolonged due to ventilator-associated pneumonia). On admission day 24, left-sided abdominal pain and nausea ensued. On examination, the patient was hypotensive and had moderate tenderness in the central abdomen, and a mass on the upper left quadrant was noted. The patient had no history of trauma in the preceding weeks. Electrocardiogram and high-sensitivity troponin I test result were unremarkable. His hemoglobin level was 8.3 g/dl, down from a baseline of 12.2 g/dl. An abrupt thrombocytosis (from 227 to 778 g/l) was evident on day 12, the same day of hemoglobin breakdown. An abdominal computed tomography scan showed a concealed splenic rupture with an extensive subcapsular hematoma, without active bleeding, measuring 18 × 17 × 15 cm (**Figure 1**). His splenic rupture was thought to be related to triple antithrombotic therapy use in the absence of rib fracture and indirect signs of traumatic lesions or splenic pathology on computed tomography scan. The patient was not considered fit for surgery or endovascular therapy and was treated conservatively (fluid resuscitation and antibiotic prophylaxis). Recovery was uneventful, and he was subsequently treated with aspirin and anticoagulation with enoxaparin. At the 1-month follow-up, he was doing well, and an abdominal ultrasound showed a regression of the hematoma and no evidence of further bleeding. The patient was discharged to a long-term acute care facility for further management.

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The authors attest they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, or patient consent where appropriate. For more information, visit the *JACC: Case Reports* author instructions page.

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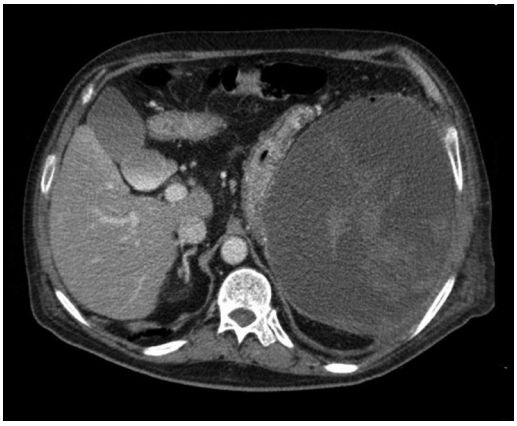
FIGURE 1 Computed Tomography Scan of the Abdomen



Computed tomography showing a concealed splenic rupture with an extensive subcapsular hematoma.

Atraumatic or spontaneous splenic hemorrhage (hematoma and rupture) is a rare condition, often presenting challenges in clinical diagnosis. Its diagnosis may be missed or delayed because of low clinical suspicion. It is a serious condition and can be life-threatening. Both anticoagulants (1) and antiplatelets (2) have been associated with atraumatic splenic rupture. There are no guidelines on its management, but it is recommended that young and stable patients be treated conservatively.

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REFERENCES

1. Basnet S, Mohanty E, Mir I, Dhital R, Koirala A, Tachamo N. Atraumatic splenic rupture associated with apixaban. SAGE Open Med Case Rep 2019;7:2050313X19832490.

2. Arshad MF, Javed N, Karim SM, Ahmad E, Abid NUA. Atraumatic splenic rupture after myocardial infarction. Eur J Case Rep Intern Med 2018;5:000827.

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