

Non-traumatic splenic rupture secondary to haemorrhagic infarct in diffuse large B-cell lymphoma

Victor Siang Hua Chan,¹ Yuen Hei Mak,¹ Yok-Lam Kwong,² Sonia Hiu Yin Lam¹

¹Department of Radiology, Queen Mary Hospital, Hong Kong, Hong Kong
²Department of Medicine, Queen Mary Hospital, Hong Kong, Hong Kong

Correspondence to

Dr Victor Siang Hua Chan, chanshvictor@gmail.com

Accepted 10 January 2019

DESCRIPTION

A 62-year-old man with stage IV follicular lymphoma presented with acute left-sided abdominal pain, acute-on-chronic anaemia and thrombocytopenia. An urgent contrast-enhanced CT scan of the abdomen demonstrated the presence of haemoperitoneum. Irregular linear-branching hypodensities distorting the splenic parenchyma present in both arterial (figure 1) and portovenous phases (figure 2), with presence of ill-defined hypoenhancing regions. Splenomegaly was present. Notably, there was absence of trauma. Overall features were compatible with non-traumatic rupture of the spleen.

The patient underwent emergency laparotomy, revealing 3 L of blood clots in the peritoneal cavity. Slow oozing of blood was noted at the region of the splenic hilum. Splenectomy was performed. Histopathological evaluation demonstrated features of diffuse large B-cell lymphoma with subcapsular infarct and haemorrhage. The surgery was uneventful. However, due to concurrent comorbidities and general ill-health, the patient progressively deteriorated and finally succumbed about a month after the surgery.

Non-traumatic splenic rupture is widely regarded as uncommon,¹ but limited case reports advocate the early recognition and intervention of this rare disease entity.² Several authors have also attributed the low index of suspicion as a major reason for the delayed diagnosis of similar cases of spontaneous splenic rupture secondary to non-Hodgkin's lymphoma.³ A high index of suspicion should hence be raised in selected patient groups such as those

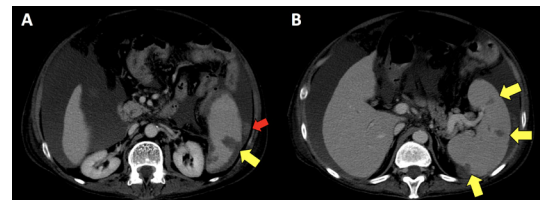


Figure 2 Contrast-enhanced CT scan of the abdomen performed in the portovenous phase (A,B), demonstrating the diffuse extent of splenic rupture, with involvement of multiple sites (yellow arrows). Haemoperitoneum (red arrows) is once again seen at the perisplenic region.

with a background of haematological malignancy and splenomegaly who present with acute abdominal pain, to urgently evaluate for this potentially life-threatening disease.

Learning points

- ▶ Non-traumatic splenic rupture should be considered in patients with splenomegaly, particularly those with pre-existing disease such as haematological malignancy.
- ▶ Prompt imaging is useful in confirming splenic rupture and can lead to early splenectomy, reducing morbidity and mortality in this potentially life-threatening disease entity.

Contributors VSHC contributed to the radiological interpretation, drafting and writing of the manuscript. YHM contributed to the drafting of the manuscript and obtained patient consent. Y-LK was the primary clinician who managed patient care, and supervised the drafting of the manuscript. SHYL assisted in the radiological diagnosis and supervised in the overall writing of the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Kaniappan K, Lim CTS, Chin PW. Non-traumatic splenic rupture - a rare first presentation of diffuse large B-cell lymphoma and a review of the literature. *BMC Cancer* 2018;18:779.
- 2 Khan SA, Muhammad I, Laabei F, et al. An unusual presentation of non pathological delayed splenic rupture: a case report. *Cases J* 2009;2:6450.
- 3 Biswas S, Keddington J, McClanathan J. Large B-cell lymphoma presenting as acute abdominal pain and spontaneous splenic rupture; a case report and review of relevant literature. *World J Emerg Surg* 2006;1:35.

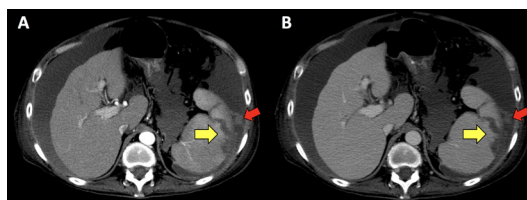


Figure 1 Contrast-enhanced CT scan of the abdomen performed in the arterial phase (A) and portovenous phase (B) demonstrating the presence of haemoperitoneum (red arrows) and persistence of irregular, linear-branching hypodensities (yellow arrows) that traverse across the entire thickness of the enlarged spleen. No active contrast extravasation is seen. In this setting of spontaneous acute abdominal pain without prior abdominal injury, CT features were compatible with non-traumatic rupture of the spleen.



© BMJ Publishing Group Limited 2019. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Chan VSH, Mak YH, Kwong Y-L, et al. *BMJ Case Rep* 2019;12:e229052. doi:10.1136/bcr-2018-229052

Copyright 2018 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <https://www.bmj.com/company/products-services/rights-and-licensing/permissions/>
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow