Case	(473) Splenic rupture after severe vomiting
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CASE PRESENTATION

A 59 year old woman presented to the emergency department with a 24 hour history of severe retching and vomiting followed by sudden-onset, intense, diffuse abdominal pain. She denied any history of trauma.

The patient had a past medical history of breast and lung adenocarcinoma and COPD for which she took indacaterol–glycopyrronium once daily. Her vital signs included a blood pressure of 90/60 mmHg and a heart rate of 95 beats/minute.

The initial abdominal examination demonstrated both guarding and rebound tenderness and blood work showed a hemoglobin level of 6.3 g/dL. Following initial stabilization a portal and delayed phase contrast-enhanced CT of the abdomen was performed that showed laceration of the superior pole and a large hematoma of the spleen with free fluid in the abdomen, measuring as blood in Hounsfield units. Splenic vessels were normal and there was no evidence of active bleeding. (Fig. 1) The patient was diagnosed with a splenic rupture, suspected to be due to the force of vomiting.

The patient was transfused with 2 units of red blood cells and underwent open splenectomy. Pathology revealed reactive lymphoid hyperplasia with no other findings. Previous abdominal CT and ultrasound showed normal size and morphology of the spleen.

DISCUSSION

Spontaneous rupture of the spleen is a rare but well-known entity, although in most cases it occurs as a complication of various systemic diseases.

The causes are varied and can be classified into seven main categories: neoplastic, infectious, hematological, inflammatory, iatrogenic, primary splenic or idiopathic. Proportionally, neoplasia (lymphoma, leukaemia) and infection (Epstein-Barr virus, hepatitis, salmonella, malaria) account for more than half of the cases. In view of the history of intense retching before onset of abdominal pain, we believe that the splenic rupture in our patient was secondary to vomiting. Spontaneous rupture of the normal spleen after minimal straining such as vomiting or coughing is exceptional and the literature on it is very scarce. A proposed mechanism for splenic rupture secondary to vomiting isthat violent contraction of the diaphragm causes tractional force on the spleen via the peritoneal reflections linking the two.

CONCLUSION

We should consider the diagnosis of spleen rupture in patients presenting with acute abdominal pain and hypotension even without a history of trauma. Rupture may occur even after minimal straining such as vomiting or coughing.

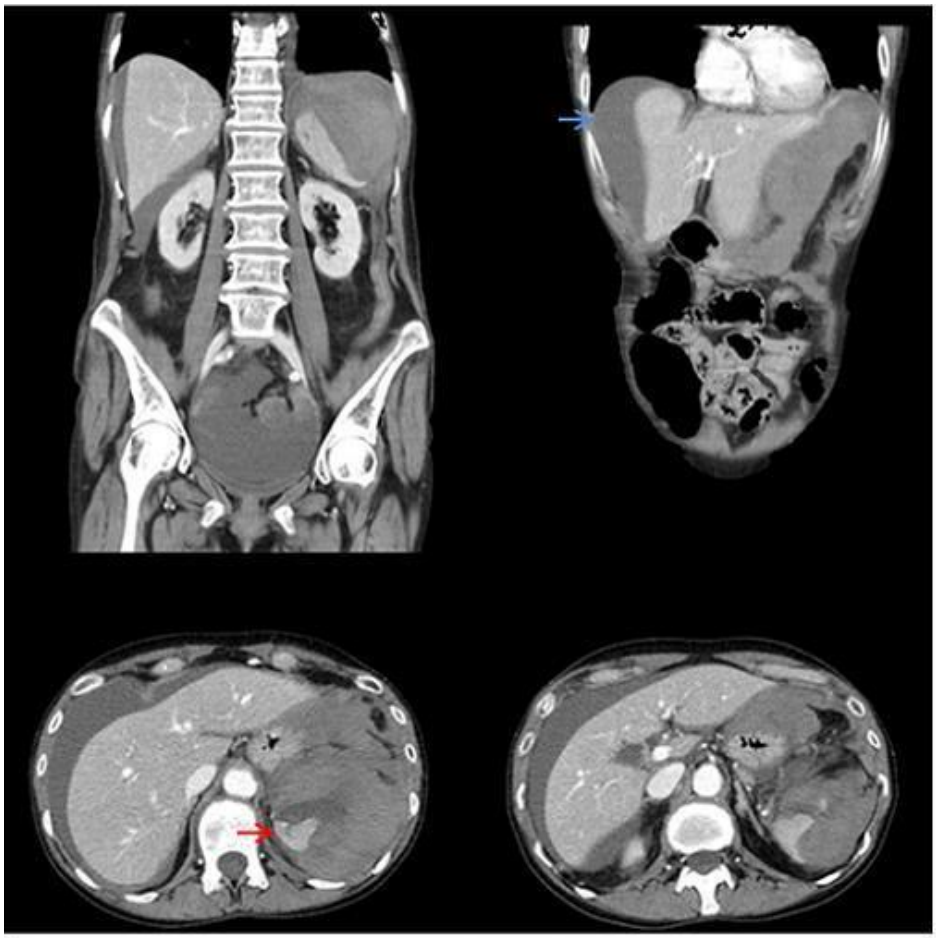

Fig. 1 Contrast-enhanced CT of the abdomen shows laceration of the superior pole (red arrow) with large haematoma centered around the spleen with apparent subcapsular and perisplenic component. Associated free fluid in the abdomen suggesting hemoperitoneum (blue arrow)

BIBLIOGRAPHY

- Lemon M, Dorsch M, Street K, Cohen R, Hale P. Splenic rupture after vomiting. J R Soc Med, 2001; 94: 527-528.

- Lennard TW, Burgess P. Vomiting and "spontaneous" rupture of the spleen. Br J Clin Pract, 1985; 39: 407-410.