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A case of massive splenomegaly successful treated with preoperative splenic artery embolization

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Conclusion

Preoperative splenic artery embolization for massive splenomegaly reduced intraoperative bleeding and made surgery safer.

Introduction

In recent years, splenectomy has increasingly been indicated for laparoscopic surgery. Splenomegaly is associated with increased splenic function, risk of variceal haemorrhage due to the development of collateral vessels and difficulty in securing the operative field. In this report, we describe our experience with a case in which laparoscopic splenectomy was safely performed after splenic artery embolisation.

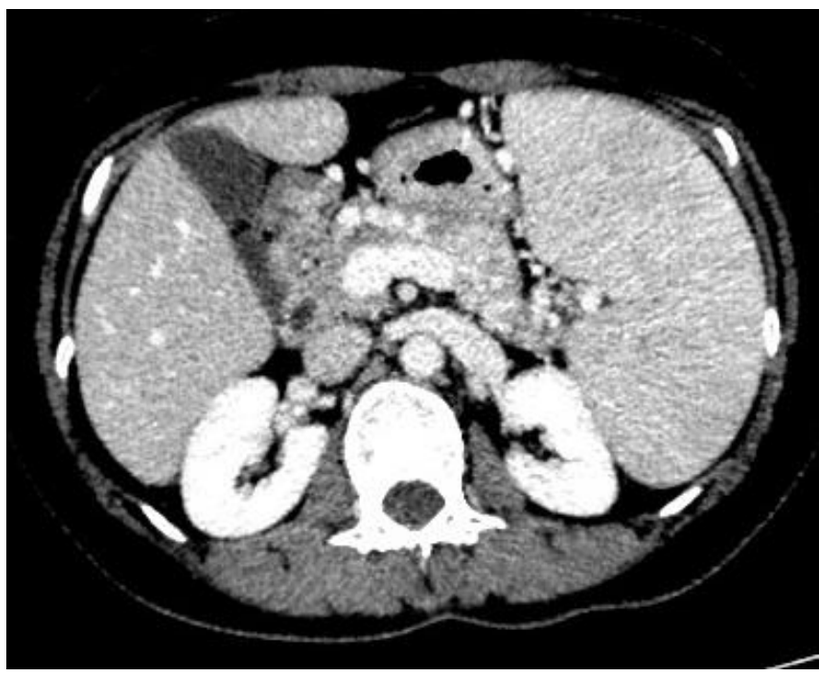
Case report

- **Patient**: 51-year-old woman
- **Chief complaint**: left-sided abdominal pain
- **History of present illness**:

She was referred to our department after a health checkup with positive fecal occult blood and H. pylori antibody.

- **Medication**: Nothing
- **Drinking history**: Nothing
- **Smoking history**: Nothing
- **Blood examination**: No obvious abnormalities

Image Contrast-enhanced Computed Tomography

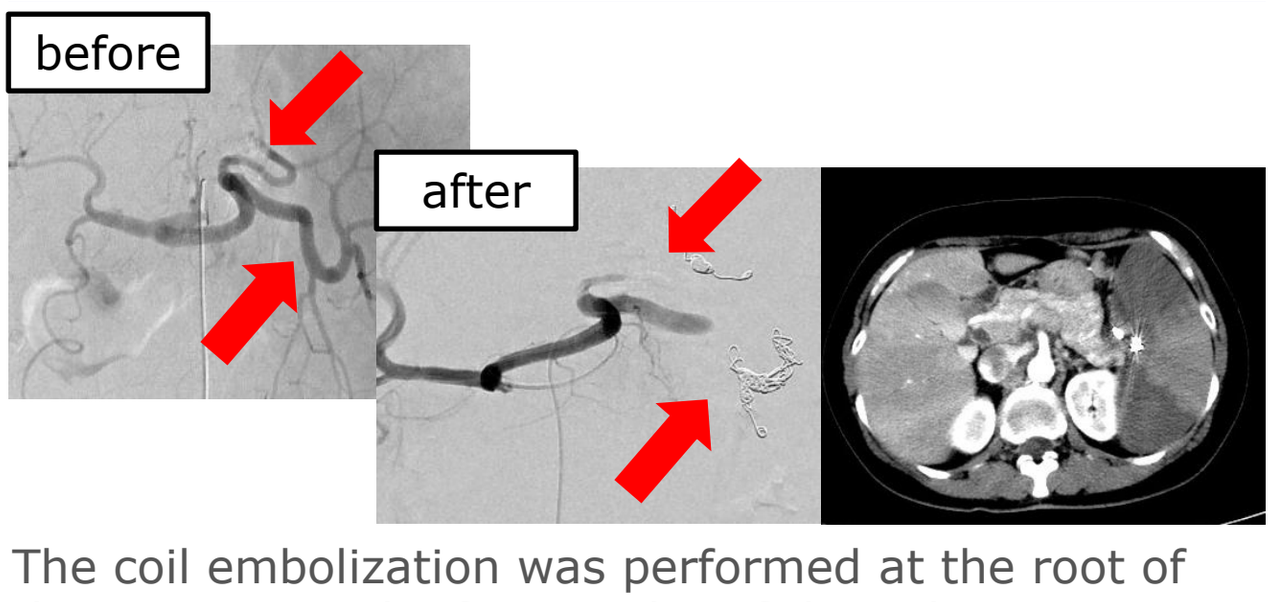


Imaging studies revealed splenic vein stenosis of unknown cause, gastric varices and a **huge splenomegaly with a maximum diameter of 23 mm**.

Treatment policy

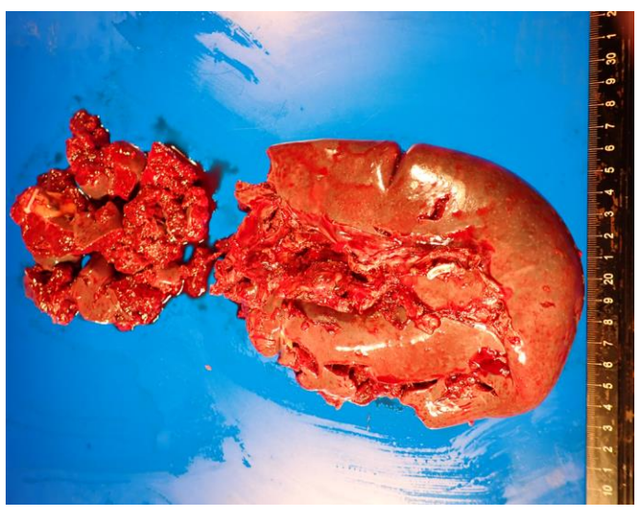
To perform splenic artery embolization prior to laparoscopic splenectomy on the day before the procedure in order to control intraoperative bleeding. Laparoscopic splenectomy was scheduled after a CT scan the next day confirmed that the embolisation was under control.

Image splenic artery embolisation



The coil embolization was performed at the root of the superior and inferior polar of the splenic artery.

Operation



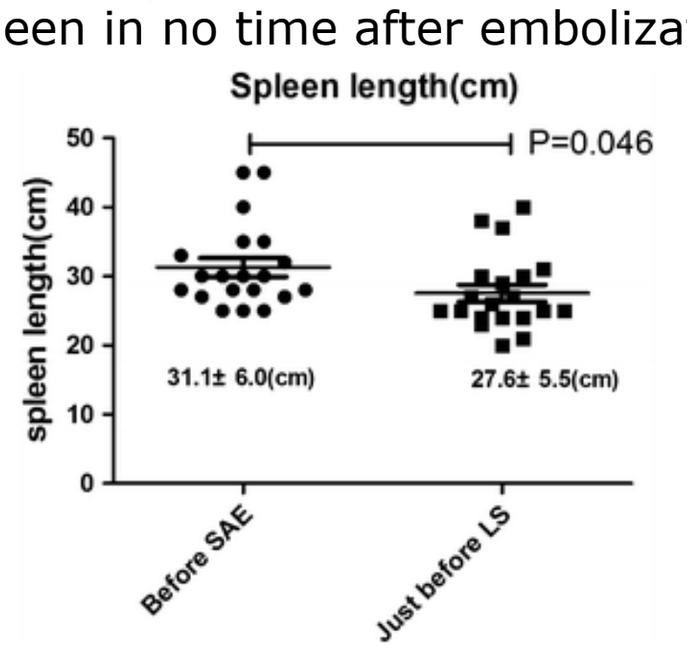
The spleen showed partial ischemia.
Surgery time: 4 hours 27 minutes Blood loss: 20ml
Size; 20x13x7 cm (Volume 941 ml)

Discussion

- Splenic artery embolization for splenomegaly has been reported to be successful in controlling intraoperative bleeding and reducing the rate of blood transfusion.

	Total ($N = 59$)	Splenectomy ($N = 41$)	SAE + splenectomy ($N = 18$)	P value
Estimated blood loss (ml), median (IQR)	502.1 (392.1–937.5)	637.0 (416.5–1109.9)	420.3 (278.1–620.1)	0.041*
Intraoperative transfusion (ml), median (IQR)	0 (0–600)	0 (0–600)	500 (0–600)	0.171
Operation time (min), mean (IQR)	160 (130–200)	174 (145–212)	141.5 (120–166.25)	0.012*

- Splenic artery embolization reduces the volume of the spleen in no time after embolization.



- This case required more time due to the treatment of the splenic portal area ,but the surgery was completed laparoscopically with minimal bleeding. The removed spleen was also reduced in size(maximum diameter 23→20 cm) by embolization.

- Complications such as fever and pancreatitis due to embolization have been reported, and embolization at the end of the splenic artery is preferable. It is important to identify the embolization site preoperatively

- Side effects of embolization include fever and abdominal pain. Because the spleen shrinks quickly after embolization, there have been reports of surgery on the same day as the embolization to avoid side effects.

References

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- Zhong Wu volume 26, pages2758–2766 (2012)