



Fever in a heart transplant recipient related to remaining LVAD component

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A 20-year-old woman with a history of left ventricular assist device (LVAD) therapy as a bridge to transplantation and a successful heart transplantation 4 years prior, presented to our hospital with complaints of fever, left-sided chest and abdominal pain, and diarrhea persisting for nearly a month. She was taking oral tacrolimus 3 mg/day and everolimus 1.25 mg/day. On admission, laboratory findings were as follows: white blood cell count, $6.27 \times 10^3 /\mu\text{L}$ (neutrophil count, $5.02 \times 10^3 /\mu\text{L}$); hemoglobin level, 9.9 g/dL; platelet count, $235 \times 10^3 /\mu\text{L}$; and C-reactive protein level, 2.98 mg/dL. She was admitted to the hospital, and blood cultures were done, but they were negative. Despite presenting with abdominal symptoms, the computed tomography scan did not reveal any significant findings. Additionally, repeated upper gastrointestinal endoscopy showed only a mild gastric ulcer without signs of cytomegalovirus infection. Because the patient's fever and abdominal symptoms persisted, 5 weeks after admission, gallium-67 scintigraphy was performed and it identified a focal accumulation of soft tissue under the left diaphragm (Fig. 1A). Three days later, the left abdominal pain worsened, with evidence of free air on computed tomography. Emergency surgery revealed perforation of the stomach resulting from the remains of the LVAD velour (Gore-Tex dual mesh), which had formed a surrounding abscess (Fig. 1B). The gastric perforation was repaired, the residual LVAD velour was removed, and the abdominal cavity was debrided and drained sufficiently. Culture of abscess pus revealed *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Gemella* spp., *Streptococcus anginosus* group, and *Candida* spp. Postoperatively, she was treated with cefmetazole and levofloxacin for one week. She was discharged 4 weeks postoperatively after her condition improved.

Well-known LVAD complications include bleeding, infection, pump thrombosis, right heart failure, device malfunction and stroke [1]. However, rare complications such as intestinal damage, fistula or abscess formation have been reported [1,2]. In our case, retained LVAD

driveline velour caused intraabdominal infection 4 years after successful heart transplantation. This highlights the potential for LVAD remnants to cause long-term post-heart transplant complications.

CRediT authorship contribution statement

Tatsuya Fujihara: Main author. **Shungo Yamamoto:** Co-author, Writing – original draft, Writing – review & editing. **Daisuke Sakamoto:** Attending physician. Writing – review & editing. **Satoshi Kutsuna:** Co-author, Writing – review & editing.

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Ethical approval

Not applicable.

Consent

Informed consent has been obtained for the publication of this clinical image.

Conflict of Interest

None to declare.

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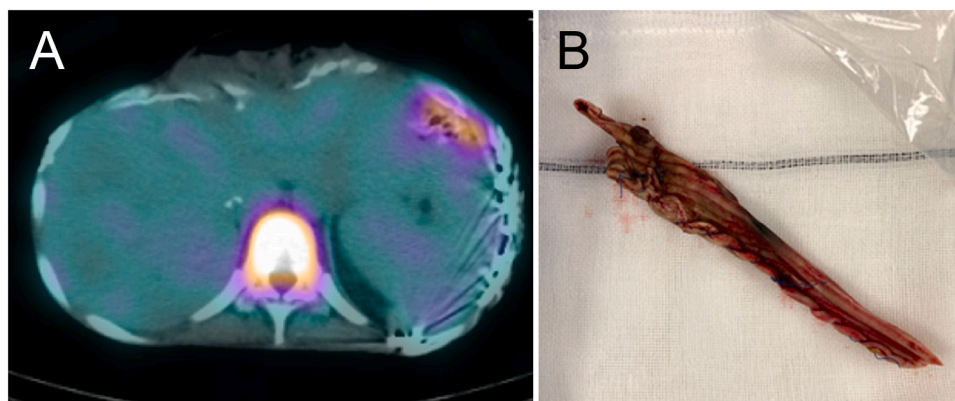


Fig. 1. (A) Ga-67 scintigraphy showing accumulation in the soft tissue under the left diaphragm. (B) Residual component found in the abdominal cavity removed during the surgery.

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