Unusual cause of left ventricular assist device failure: pendulating mass in the cavity

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A 29-year-old man suddenly developed low output syndrome 5 months after left ventricular assist device (LVAD) implantation. Echocardiography revealed a pendulating mass at the inflow cannula of the LVAD. The obstacle was removed surgically, which turned out to be myocardium with fibrous tissue and thrombi histologically.

Fig. 1. An abnormal structure obstructing the inflow cannula of the extra-corporeal LVAD (Toyobo-LVAD; Toyobo-National Cardiovascular Center, Osaka, Japan) at the apex of the left ventricle and causing incomplete blood suction. The inflow cannula was made of polyvinyl chloride, and inside diameter was 9 mm.

Fig. 2. Upper panel, gross appearance; lower panels, sections stained with Masson’s trichrome stain. The histological study revealed that the obstacle partially consisted of mitral chordae and accompanied papillary muscle with thrombi.