A rare case of splenic hematoma after drainage of splenic abscess with infective endocarditis

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Abstract

Infective endocarditis with splenic abscesses remains a complex and unusual clinical scenario. We present a rare case of splenic hematoma caused by puncture and drainage of splenic abscess with infective endocarditis. The puncture drainage of the splenic abscess may lead to bleeding or the spread of infection. So when infective endocarditis is complicated with splenic abscess, splenectomy rather than drainage of the splenic abscess is preferred to lower the risk of splenic hemorrhage and eradicate the source of infection.

Title page

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Running title

hematoma after drainage of splenic abscess

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Author contributions
All the authors participated in the management of this patient and provided suggestions for the manuscript. Kun Huang followed up the patient closely, collected the data and wrote the manuscript. Jiaqi Yang provided some suggestions about the manuscript and management of this patient. Xuejie Li reviewed the manuscript and was the corresponding author.

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Patient consent statement
Written informed consent was obtained from the patient’s guardian for the publication of this case report and the accompanying images.

Abstract
Infective endocarditis with splenic abscesses remains a complex and unusual clinical scenario. We present a rare case of splenic hematoma caused by puncture and drainage of splenic abscess with infective endocarditis. The puncture drainage of the splenic abscess may lead to bleeding or the spread of infection. So when infective endocarditis is complicated with splenic abscess, splenectomy rather than drainage of the splenic abscess is preferred to lower the risk of splenic hemorrhage and eradicate the source of infection.

KEYWORDS
splenic hematoma, splenic abscess, infective endocarditis

A 57-year-old female patient was admitted for fever and was diagnosed with infective endocarditis. Ultrasonography confirmed that the patient had a splenic abscess due to mitral valve vegetation shedding. Blood cultures obtained on admission were subsequently positive for streptococcus viridans, and anti-infective treatment was begun. The splenic puncture and drainage were performed, but the drainage of the abscess was abandoned for the splenic hemorrhage. After the anti-infection treatment, the body temperature was normal and the blood culture was negative. Mitral valve replacement combined with splenectomy was performed simultaneously.

Intraoperative 3D TEE shows vegetation in the anterior mitral valve A1 area (red arrow), while vegetation can also be shown in the posterior valve P3 area (yellow arrow) (Figure 1A). The vegetation of the anterior valve A1 area (red arrow) can also be seen in the 2D TEE view (Figure 1B). TEE view shows the abscess (red arrow) on the lateral side of the spleen and a puncture-induced hematoma (yellow arrow) (Figure 1C).

Current guidelines recommend that splenectomy should be performed first to reduce the risk of infection of the prosthetic valve, however, the timing and order of operation remain controversial. Due to controlled infection, this patient underwent splenectomy and valve replacement simultaneously, with good clinical outcomes.

Enver et al performed echo-guided drainage in 36 cases of splenic abscesses, respectively, and reported no complications such as bleeding. However, in this patient, the drainage of the splenic abscess leads to bleeding.
So when infective endocarditis is complicated with splenic abscess, splenectomy rather than drainage of the splenic abscess is preferred to lower the risk of splenic hemorrhage and eradicate the source of infection.

**References:**


Figure legend:

FIGURE 1 Intraoperative 3D TEE (A) shows vegetation in the anterior mitral valve A1 area (red arrow) and the posterior valve P3 area (yellow arrow). The vegetation of the anterior valve A1 area (red arrow) can also be seen in the 2D TEE view (B). TEE view (C) shows the abscess (red arrow) on the lateral side of the spleen and a puncture-induced hematoma (yellow arrow). The resected spleen (D) shows a perisplenic abscess (red arrow) and a puncture wound (yellow arrow).