Clinical picture

A 20-year retained guidewire, should it be removed?

Case presentation

A 37-year-old female presented repeatedly with oxacillin-sensitive *Staphylococcus aureus* (OSSA) bacteremia over a 1-year period. She had no history of serious infection until these bacteremia episodes. She also denied use of illicit drugs or any new open wounds. A physical examination revealed a painful left sternoclavicular mass. Radiography showed three retained segments of a guidewire: a short segment in the left brachiocephalic vein, a long segment from the left brachiocephalic vein down to the infrahepatic inferior vena cava (IVC) and a long segment from the infrahepatic IVC down to the right external iliac vein (Figures 1 and 2). Computed tomography revealed an additional sternoclavicular hypodense lesion consistent with an abscess. A review of her medical history revealed that she had suffered a major accident in 1991, and had undergone right femoral central venous catheterization for resuscitation. Blood tests showed white blood cell count 18,940/mm$^3$, highsensitivity-C-reactive protein 5 mg/dl and erythrocyte sedimentation rate 102 mm/h. Cardiologists failed to extract the guidewire percutaneously. She received an open procedure, and the guidewire, which was found to be brittle and embedded in fibrous tissue, was successfully removed (Figure 3). A bacterial culture of the tissue coating the guidewire showed OSSA. After percutaneous abscess drainage and treatment with antibiotics, she was discharged uneventfully.

Iatrogenic intravascular loss of a guidewire is not infrequently encountered in clinical practice, and usually recognized immediately. Only a few cases

![Figure 1. Chest radiograph showed an unsuspected retained guidewire with its cephalic tip projecting over the left brachiocephalic vein.](image1)

![Figure 2. Plain abdominal radiograph showed the retained guidewire extending caudally to the right external iliac vein.](image2)
of retained guidewires have been reported. In addition to the great vessels, a retained guidewire within a coronary vessel has been reported. Clinical presentations include arrhythmias, sepsis, perforation and thromboembolism. Percutaneous and surgical retrievals are the principal management, however, such procedures in asymptomatic patients or chronic settings are under debate. Our case demonstrated late complications that developed even after a 20-year symptom-free period. Therefore, we suggest that even risky surgical extraction should be attempted.

Photographs and text from: Y.-N. Lin, Division of Cardiology, Department of Internal Medicine; J.-W. Chou, Division of Gastroenterology and Hepatology, Department of Internal Medicine; Y.-H. Chen, Department of Internal Medicine; C.-Y. Liu, Department of Emergency Medicine; C.-M. Ho, Division of General Medicine, Department of Internal Medicine, China Medical University Hospital, Taichung, Taiwan. email: d14323@mail.cmuh.org.tw

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### References


