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IMAGES IN INTERVENTION

Differential Diagnosis for an Intracaval Foreign Body

Nicolas Majunke, MD, Elisabeth Unger, MS, Christian Besler, MD, Marcus Sandri, MD

A 74-year-old female patient presented to our outpatient clinic for a 1-month follow-up visit after combined transcatheter mitral and tricuspid valve repair for valvular regurgitation. Echocardiography confirmed proper clip placement with significantly reduced mitral and tricuspid regurgitation. However, it also revealed an elongated intravascular foreign body (IFB) in the inferior vena cava (**Figure 1A**). The structure was also seen on abdominal radiography as radiopaque material following the course of the inferior vena cava, with a length of 9.3 cm (**Figure 1B**). Primarily, differential diagnosis for the IFB included a central line fragment or sheath following atrial valve intervention. Fluoroscopy was performed for further visualization and retrieval (**Figure 1C**). Upon snaring, the IFB fractured and partially embolized into the pulmonary artery (**Figure 1D**). Surprisingly, following successful retrieval of all items, texture and presentation revealed a fractured cement embolus (**Figure 1E**). Nine months prior to interventional valve repair, the patient had undergone cement-augmented multilevel spine fusion and cage implantation following traumatic fracture of the L1 vertebra. Further fluoroscopic imaging exposed paravertebral leakage (**Figure 1F**), which was also evident on radiography (**Figure 1B**).

Cement emboli have been reported as rare and sometimes life-threatening complications following pedicle screw augmentation. The present case highlights the necessity to consider fragile cement emboli as a potential differential diagnosis for IFB when planning retrieval strategies in patients with cement-augmented spine fusion.

From the Heart Center Leipzig - University Hospital, Department of Cardiology, Leipzig, Germany. The authors have reported that they have no relationships relevant to the contents of this paper to disclose.

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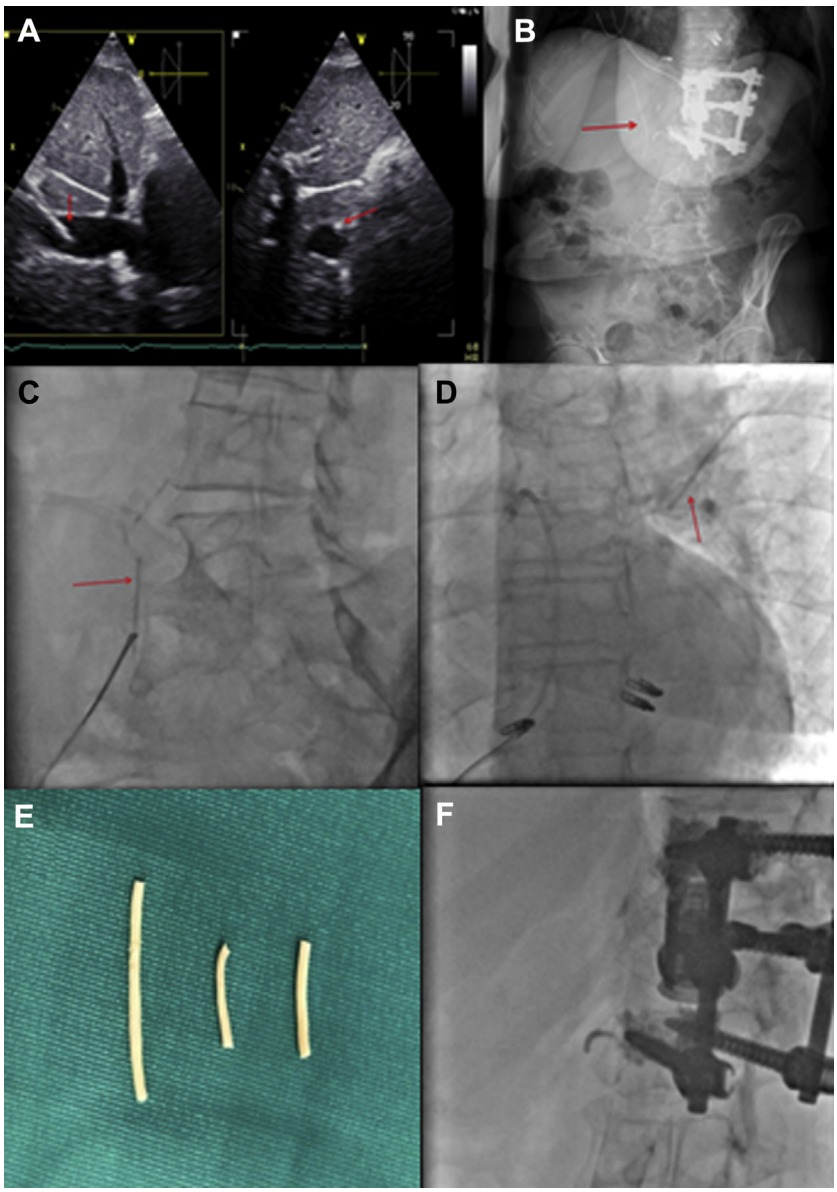
FIGURE 1 Cement Emboli on Echocardiography, Radiography, Fluoroscopy, and After Retrieval



(A) Echocardiography revealed an elongated intravascular foreign body in the inferior vena cava. **(B)** Radiopaque material following the course of the inferior vena cava with a length of 9.3 cm on abdominal radiography. **(C)** Snaring of the foreign body. **(D)** Embolization of the intravascular foreign body to the pulmonary artery. **(E)** The fractured cement embolus after successful retrieval. **(F)** Paravertebral leakage on fluoroscopic imaging.

ADDRESS FOR CORRESPONDENCE: Dr. Nicolas Majunke, Heart Center Leipzig - University Hospital, Struempellstrasse 39, 04289 Leipzig, Germany. E-mail: nicolas.majunke@medizin.uni-leipzig.de.

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