Lost guidewire protrudes through the heart and chest

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A 65-year-old woman was referred to our institution with an ‘iron wire’ that protruded through her chest (Panel A). She had no dyspnoea, pain, or fever. Her medical history included a mitral- and tricuspid valve repair 15 years ago and she was on permanent dialysis. Computed tomography scan (Panel B) showed a guidewire of ~40 cm protruding the right atrium and subsequently the anterior chest wall. On retrospective review of chest X-rays, the guidewire was visible for the first time 6 months before, when she was admitted in the referring hospital for dialysis. During that admission a central venous catheter was placed in the right femoral vein. Presumably the guidewire was lost during placement of the central venous catheter. In a 6-month period, the guidewire migrated to the right atrium, protruded through the chest and moved on every heartbeat (Supplementary material online, Video S1). Because of the adhesions of her previous cardiac surgery, the risk of developing pericardial tamponade after extraction was expected to be low. However, for safety reasons, extraction of the guidewire was scheduled with a fully equipped cardiac surgery team and the heart–lung machine on standby. The guidewire was mobilized at skin level and gently extracted under trans-oesophageal echocardiography surveillance (Panel C) (Supplementary material online, Video S2). There was no pericardial effusion after extraction, which was also absent during follow-up transthoracic echocardiography. On post-operative Day 1, the patient was discharged after an uneventful admission. We advise to treat similar complications under optimal safety conditions.

Panel A. ‘Iron’ wire protrudes through chest.
Panel B. Three-dimensional reconstruction of the computed tomography scan.
Panel C. The extracted retained guidewire.

Supplementary material is available at European Heart Journal online.

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