Loss of the tip of a transseptal needle in the heart

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A 71-year-old male with highly symptomatic persistent atrial fibrillation for 6 years (EHRA III) was admitted for pulmonary vein isolation after failure of antiarrhythmic drug therapy. After vascular access, a steerable decapolar catheter was placed into the coronary sinus via the left femoral vein (Livewire®, St Jude Medical, St Paul, MN, USA). A transseptal puncture was accomplished by utilizing fluoroscopic imaging and pressure monitoring with the use of a long 8 Fr sheath (Daig SL1®, BRK trans-septal needle®, St Jude Medical). Once the needle tip crossed the interatrial septum, its positioning in the left atrium was confirmed by dye injection through its lumen to visualize the left atrial cavity. During this manoeuvre, the distal tip of the transseptal needle dislocated into the left atrium (Figure 1A–C, white arrow; see Supplementary material online, Movie S1) and ended in the left superior pulmonary vein. The needle showed a loss of the distal part compared with an intact one (Figure 1D, white arrowhead). Multiple attempts of retrieval of the embolized fragment failed. Therefore, we decided to place a bare-metal stent for fixation just before the fragment in the very peripheral left superior pulmonary vein.

The patient developed no symptoms and was discharged a few days later. Although transseptal catheterization is associated with a high success and low complication rate, interventional cardiologists should be aware of this particular unusual complication with the used system for transseptal access.

Supplementary material
Supplementary material is available at European Heart Journal online.

Figure 1 Fluoroscopic imaging left anterior oblique 60° of dislocation of needle tip (white arrow) while dye injection after transseptal puncture (A–C) and needle tip with loss of distal part (white arrowhead) compared with intact transseptal needle (D).