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Transseptal removal of fractured guide extension catheter using deflectable sheath

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A 70-year-old female was referred for percutaneous treatment of lesions in a heavily calcified left anterior descending artery (LAD). Successful percutaneous coronary intervention (PCI) with implantation of 4 drug eluting stents (DES) to left main (LM)/LAD artery required the use of a guide extension catheter (GEC) due to calcified and tortuous LAD. GEC (Guidon, IMDS, Netherlands) was delivered with difficulties using a protruding 3.0 mm balloon. An unexpected detachment of the soft distal tip of the GEC (at the connection of the rapid exchange section and pushing rod) and its dislocation from the guiding catheter to the left ventricle (LV) was observed during final angiography (Fig. 1A). The fracture occurred most likely due to considerable insertion forces and friction applied to the GEC tip. Echocardiography imaging confirmed localization of the GEC in the LV and left atrium (LA) (Fig. 1B). Angiographic imaging visualized the presence of the radiopaque GEC tip in the LA (Fig. 1C). An attempt to retrieve the GEC via trans-aortic approach using 7-Fr MPA catheter and gooseneck snare loop was unsuccessful, most likely due to fact that the tip of GEC located in the LV was tangled in trabeculations. It was therefore decided to use a trans-septal approach to recapture the dislocated GEC under fluoroscopic and transesophageal echocardiography guidance. An 8.5 deflectable Agilis sheath was introduced into the LA after a trans-septal puncture and retrieval of the dislodged GEC was performed using a gooseneck snare loop (Fig. 1D). The deflectable sheath gives the guide catheter and snare additional freedom of movement and it has a profile large enough for the retrieval of the snared GEC. The GEC was successfully removed from the LA (Fig. 1E), which was confirmed in the final echocardiography (Fig. 1F).

Conflict of interest: None declared

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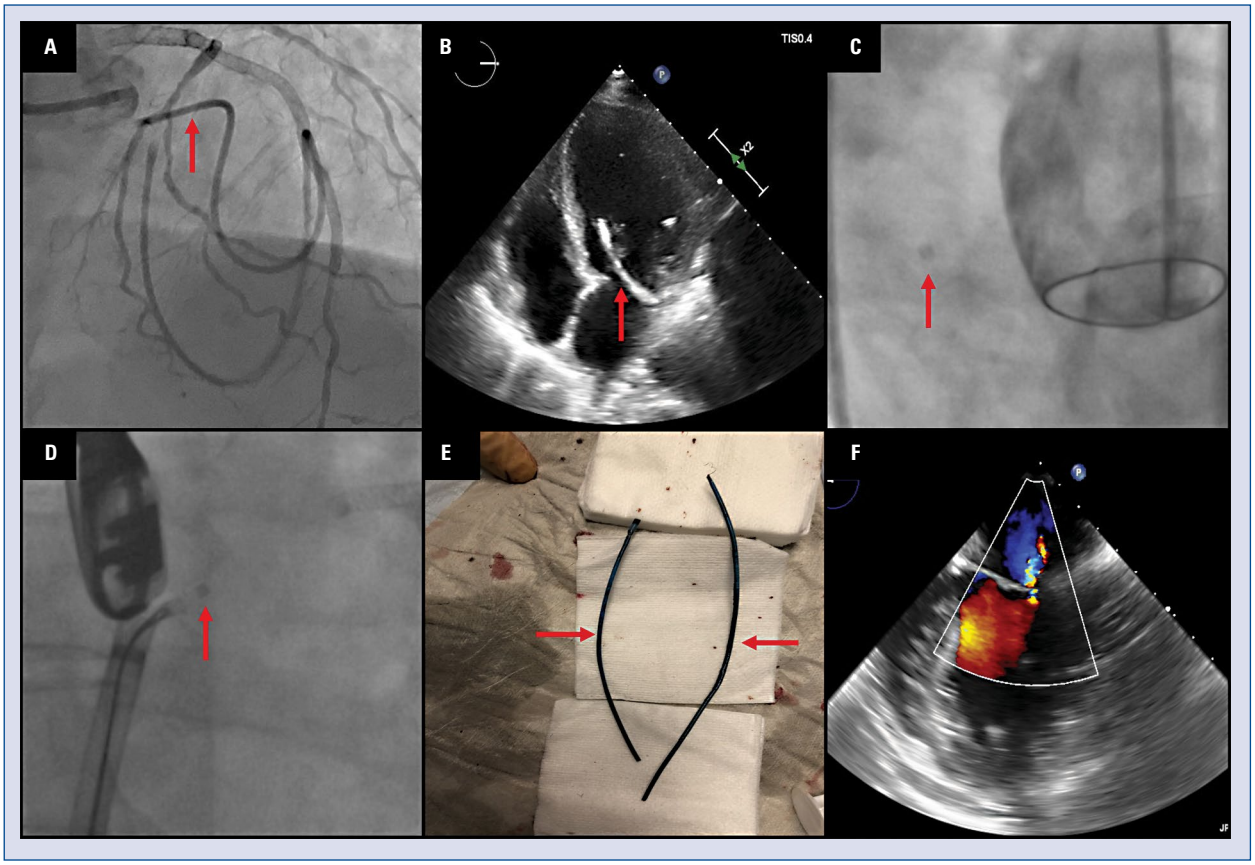

Figure 1. A. Angiography demonstrates detachment of the soft distal tip of the guide extension catheter (GEC) filled with contrast from guiding catheter to the left ventricle; **B.** Echocardiography confirmed placement of the GEC inside the left ventricle and left atrium; **C.** Angiographic imaging visualized placement of the distal radiopaque tip of GEC in the left atrium; **D.** Successful percutaneous retrieval of the GEC was performed via the trans-septal approach; **E.** The GEC was detracted inside the sheath; **F.** Final echocardiography confirmed successful retrieval of the GEC.