Failed valve-in-valve transcatheter mitral valve implantation

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A 73-year old man underwent trans-septal anterograde implantation of a 26-mm Sapien-XT valve (Edwards Lifesciences, CA, USA) to treat a degenerated 27-mm Carpentier-Edwards bioprosthesis. During the follow-up, the patient experienced severe haemolysis with moderate-to-severe inter-valvular leak, and fluoroscopy revealed possible incomplete apposition of the Sapien-XT (Fig. 1). Reoperation was preferred and a mechanical 25 mm prosthesis implanted.

Figure 1: Moderate-to-severe inter-valvular leak at echocardiography (A and B). Possible incomplete apposition of the Sapien XT inside of the Carpentier-Edwards bioprosthesis at fluoroscopy (C). Sapien XT removal at surgical reoperation (D). Post-explant assessment of the valves (E and F) showing the implanted 26-mm Sapien XT valve inside the mitral bioprosthesis; transillumination of the prosthesis revealed two major areas of valve-in-valve incomplete apposition (G).