A seven-year-old girl with valvular pulmonary stenosis underwent a second balloon valvuloplasty procedure after four years. In addition to the diagnostic procedure, a 5 French (F) sheath was exchanged over a 0.035-inch super-stiff wire for an 8F Medtronic sheath (Medtronic Inc., Minneapolis, MN), with some force and twisting applied. During the sheath exchange, some bleeding occurred, as we pushed the 8F sheath down with such force that it was perhaps under unnecessary pressure. When the balloon procedure was completed, we noticed that the sheath had become lodged. When an attempt was made to extract it, the two-thirds distal portion of the sheath (8.5 cm) fragmented into the right femoral vein. We used an 18-gauge longer needle for the same femoral vein just to the level of the distal part of the fragmented sheath, under fluoroscopy guidance. However, the twisted end could not enter the standard guidewire. Thus, a 0.035 hydrophilic guidewire was gently pushed inside the fragmented sheath beyond to the distal end (Fig. A). A 5F sheath was placed in to the same vessel. Mullins 13F long sheath was placed into the left femoral vein. To reduce the patient’s trauma, we wanted to capture its long-axis parallel position with a Dotter intravascular retrieval basket catheter (Cook, Bloomington, IN). Coaxial capture of a rigid 8F fragmented sheath limited the vascular trauma. But snaring of this fragmented sheath could be resulted its angulation problem. After the fragmented sheath was captured, the entrapped system was slowly retrieved under fluoroscopy guidance (Figs. B, C, D). We conclude that: 1. no amount of force will result in success, and 2. retrieval with coaxial technique may be less traumatic.

Figures—(A) Image after passing a hydrophilic guidewire through the 8F fragmented sheath. (B) Opened basket catheter attempt to snare the sheath with coaxial position in the right atrium. (C) The whole system was slowly withdrawn from the opposite femoral vein. (D) Length and twisted end of the fragmented sheath are seen.