

Removal of a Broken Coronary Guidewire

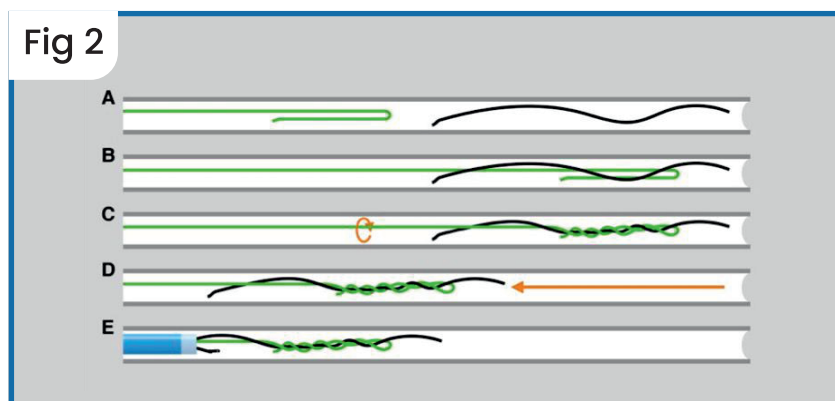
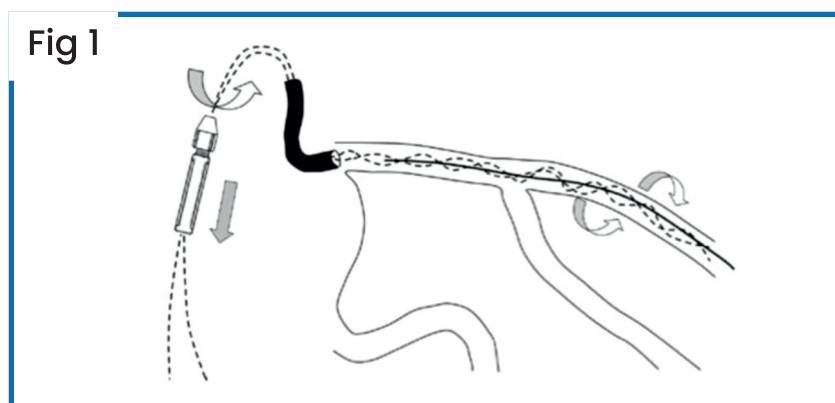
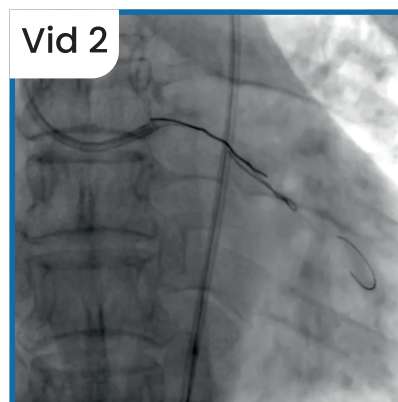
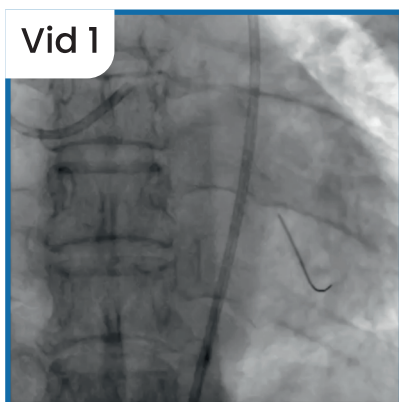
A 48-year-old male was referred to us for removal of a broken coronary guide wire. He was taken for angioplasty of a lesion in Circumflex artery (LCx) at another hospital in the city. While trying to negotiate the wire, the distal radio-opaque portion fractured and remained as a free floating foreign body in the LCx (Video 1). A vain attempt was made at that hospital to remove it with a coronary snare. He was advised to undergo surgical removal of the wire. His primary physician referred him to us for further management.

We decided to try a multi-wire technique to remove the broken piece. Two coronary guide wires were passed in the LCx by the side of the broken wire. A torquing device was then tightened around proximal end of both wires just outside the “y” connector. By twisting the device multiple times, the broken piece was entangled in the two wires and the whole assembly was pulled out successfully (Video 2). The procedure time was 5 minutes.

Multiple-wire technique is one of the many other techniques used for retrieving free floating broken piece of guide-wire in the coronary artery. We will limit ourselves to this technique in this article. Fig 1 depicts the steps involved while using this technique (as has been described above). There is an interesting modification of this technique called “knuckle wire technique” (Fig 2). The steps are follows:

(A) To retrieve a broken piece of guidewire lost in a coronary artery (black wire) advance, a polymer-jacketed tapered-tip guidewire (green wire) with a knuckle of ~5–6 cm length was used. (B) Parallel and overlap with the broken wire. (C) Twist around. (D) Retrieve. (E) Pieces of the broken and sometimes also the retrieval wire can fold while retrieving into the guide catheter.

Multiple-wire technique and its knuckle wire modification is a simple, safe and effective method of retrieving broken guide-wires from the coronary tree. It does not require any special hardware and has an easy learning curve.



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