Endovascular Retrieval of Broken Arterial Cannulas

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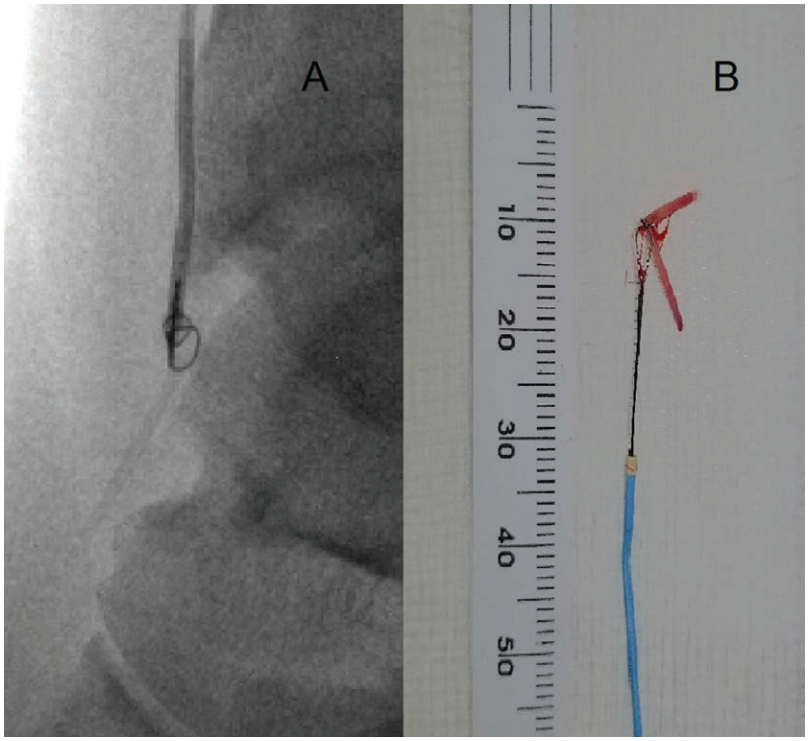

Fracture/embolization is a rare complication of arterial cannulas for continuous hemodynamic monitoring during general anesthesia.[1] While endovascular retrieval of embolized material is not a new technique, management of broken arterial cannulas has only been described as surgical, in total or partially. However, complete endovascular treatment can be successfully performed with potentially less risk. Image A shows an example of endovascular removal of a broken 3.175-cm 20-gauge Teflon catheter inserted into the dorsalis pedis artery for monitoring during general anesthesia. Ipsilateral antegrade puncture of the common femoral artery was performed, and a 7-French sheath was brought into the popliteal artery. A 4-French loop-snare was brought to the dorsalis pedis artery. Arterial cannulas are usually easily seen under fluoroscopy. Ultrasound and computed tomography scan have also been described as efficient adjuncts for surgical removal,[2] but are typically of no use during endovascular removal. The broken fragment (image B) was snared (Supplemental Digital Video 1, http://links.lww.com/ALNB808) and retrieved in the sheath (Supplemental Digital Video 2, http://links.lww.com/ALN/B809). Endovascular removal of a fractured catheter can also be performed in the same way from other arterial access (*e.g.*, radial or femoral). It can also be retrieved from a peripheral or central venous access. Although considered a relatively safe procedure, some authors believe that repeated flushing and manipulative adjustments associated with prolonged cannulation time may represent risk factors for fracturing arterial catheters.[3] Every catheter should be carefully inspected after removal to ensure that there is no missing piece. Endovascular retrieval should be considered whenever possible before turning to more invasive techniques.

Competing Interests

The authors declare no competing interests.

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