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Successful transradial retrieval of a Judkings Right broken catheter fragment during Carotid Angiography with the Exeter Snare

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Abstract

Interventionalists should be capable of solving the complications that may occur during interventional procedures. As transradial access extends its uses, new events are seen in the same moment. We report a complicated case, where a broken catheter has embolized to the right carotid while trying to perform an angiography. The catheter was successfully retrieved through the radial artery with the **Exeter Snare (AndraTec Germany)**.

Key words: Carotid; Catheterization; Material retrieval; Radial; Access; Complications.

Introduction

Radial artery access is increasingly adopted by interventionalists as a first choice access, not only in coronary interventions, but also for other peripheral vascular lesions. As this technique increases, different and new complications are seen, even though the radial access site is safer and associated with lower incidence of complications than femoral access. We describe a very uncommon situation of a broken catheter retained in the right carotid artery. The complication has been successfully resolved by the same radial access with the **Exeter Snare (AndraTec Germany)**.

Case Report

A 65 year old female patient was presented to our department complaining about headache, dizziness, some weakness and difficulties to walk during the last year. She had history of hypothyroidism and dyslipidemia. She brought a carotid duplex ultrasound that evidenced intima media thickening of the left internal carotid. She had a cranial and extracranial Angiography, and a Computerized Tomography (CT), which evidenced a doubtful vascular lesion in the left Carotid.



Fig.:1 Righth Carotid Angiography



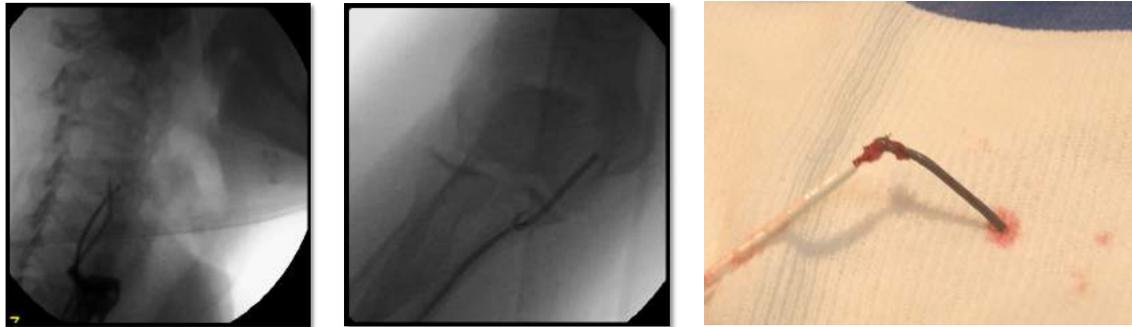
Figure 2. Angiographic picture of the left carotid artery and a fragment of the dislodged Catheter within the Right Carotid.



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She was operated on her cervical vertebrae because of these symptoms six month ago with no clinical change after the surgery. On physical examination, vitals were stable and neurologic signs were normal. A right transradial access was performed and a 6 Fr. sheath has been inserted. Our usual practice is a mix of heparin and nitroglycerin which was injected into the sheath. Carotid Angiography was performed with a 6 Fr (JR Right Coronary catheter). During this procedure the catheter fragmented and embolized into the Right External Carotid artery. Once the overview was completed, the fragment was successfully removed by a Nitinol **Exeter Snare® (AndraTec Germany)** through the radial artery, taking out the whole piece (sheath included).

A TR Band® (Terumo Corporation) was used to compress the radial site access after the procedure. The fragment that was captured had a small clot attached. The patient was discharged on the same day after the procedure. Two days later a duplex scan on her radial artery showed a patent artery.



Discussion

Catheter fracture is an uncommon complication of percutaneous intervention. Broken guidewires, balloons, or as in this case, a fragment of a broken catheter could lead to serious complications¹. The radial artery access is growing as first choice access in the vast majority of coronary procedures. Generally, Interventionalists, are accustomed to treat complications through femoral access, but as TRI advances, such complications sometimes need to be solved through the same puncture site. Limited information is available about how to proceed when foreign bodies or devices are retained during an intervention by the wrist. Removal of dislodged material might require a vascular surgery or an endovascular approach. In our case we could remove successfully a fragment 6 Fr. JR diagnostic catheter, with a Nitinol **Exeter Snare (AndraTec Germany)** without damaging this sensitive artery. Other experiences are: A case of a 4 Fr broken catheter, during a coronary angioplasty, which was removed by twirling two 0.014” guidewires and extracted through the radial sheath¹. Some other devices were successfully removed within the vascular anatomy through the radial artery^{1,2}. In this case the fragment was bigger than those. Luckily, the lost catheter stayed in the External Carotid, and it did not embolize distally when we tried to snare it. We decided to complete the angiography, and rapidly snared the broken catheter, in order to avoid further complications. To the best of our knowledge, no other case has described the successful retrieval of a foreign body from the carotid through the radial artery.

Conclusion

We noticed that retrieval through the radial artery of some materials or foreign bodies slightly bigger than we have seen on other reports could be carefully done without complications. It should be done rapidly; taking into account that thrombus formation is imminent. The knowledge of different retrieval techniques is very useful to solve this situation. AndraTec offers **Exeter Micro Snare** with minimal diameters as 2mm to 7mm and **Exeter Macro Snares** with 5mm to 35mm diameter to perfectly choose for the ideal vessel diameter for less trauma and effective retrieval.

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Conflict of Interests: We have no conflict of interest *Correspondence to: Email: danfer1965@hotmail.com, danfer1965@gmail.com, jpz87@yahoo.com / jpabloz87@gmail.com

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