



Extraction of a Fragmented Guiding Catheter in Elderly Patients with Myocardial Infarction

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ABSTRACT

Because of the increasing number of elderly patients undergoing diagnostic coronary angiography and percutaneous coronary intervention, the incidence of rare complications might increase. Here, we discuss the management of a fragmented guiding catheter in elderly patients with inferior myocardial infarction.

Key Words: Complication; fragmented guiding catheter; myocardial infarction; elderly patient

Akut Miyokart İnfarktüsü Yaşlı Hastada Kopan Kılavuz Kateterin Dışarı Alınması

ÖZET

Yaşlı hastalarda tanısal koroner anjiyografi ve perkütan koroner girişimlerin artması, çok nadir görülen komplikasyonların artmasına yol açabilir. Bu olguda akut inferior miyokart infarktüsü ile başvuran yaşlı hastada kopan kılavuz kateterin dışarı alınmasını tartıştık.

Anahtar Kelimeler: Komplikasyon; kılavuz kateterin kopması; miyokart infarktüsü; yaşlı hasta

INTRODUCTION

The population of elderly adults is rapidly increasing worldwide⁽¹⁾. Acute coronary syndrome (ACS) accounts for approximately one-third of all deaths among elderly patients worldwide, and the management of those with coronary artery disease (CAD) poses a challenge because multiple comorbidities might limit treatment options⁽²⁾. Earlier studies have shown that elderly patients are less likely to undergo percutaneous coronary intervention (PCI) because of lower success rates and increased complication rates⁽³⁾. Despite these problems, PCI may be a viable treatment option for elderly patients.

CASE REPORT

An 88 year old male patient was admitted to our hospital with acute inferior myocardial infarction. A 7-French (Fr) sheath was placed in the right femoral artery, and a temporary transvenous pacemaker was implanted through the right femoral vein because of symptomatic bradycardia. A JR4 guiding catheter was advanced to the right coronary to place the right coronary artery. After catheter manipulations, we observed a fragmented guiding catheter because of excessive iliac artery tortuosity. The proximal tip of the catheter was in the ascending aorta, whereas the distal end was in the abdominal aorta at the renal artery level. The 7-Fr sheath was replaced with a 9-Fr sheath in the right femoral artery. A snare was advanced to the abdominal aorta. The distal end of the guiding catheter was grasped, and the distal ends of the guiding catheter were withdrawn until the right femoral artery (Figure 1). However, it could not be inserted into the sheath with a proper position; therefore, surgical intervention was required. An 7-Fr sheath was placed in the left femoral artery, and a JR4 guiding catheter was advanced to the right coronary artery (Figure 2A). The occlusion was crossed with a 0.014-inch guide wire and predilated with a 2.0 × 20 mm balloon, and a 3.5 × 32 mm stent was placed, resulting TIMI 3 flow (Figure 2B,C,D). Then, the catheter was successfully removed with minor femoral exploration.

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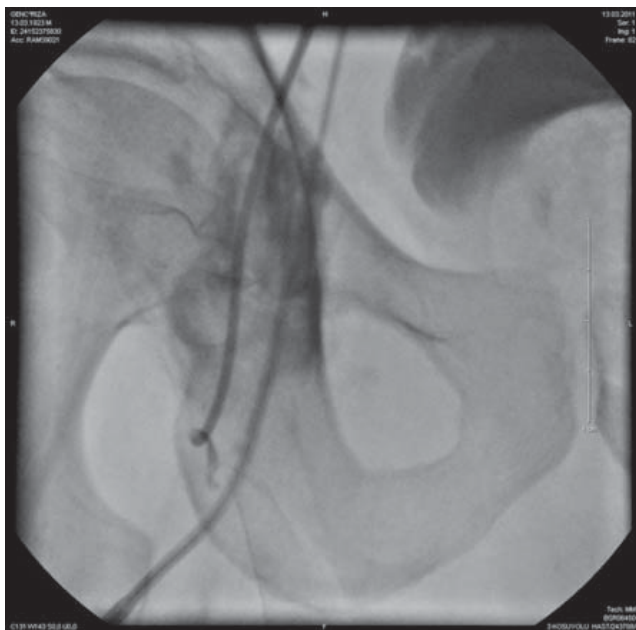


Figure 1. The distal end of a fragmented guiding catheter after withdrawal from the right femoral artery with a snare.

DISCUSSION

In the present case, we describe a rare complication of percutaneous intervention. The fragmented guiding catheter in the descending aorta was retrieved without performing a major surgical operation. Recently, rising incidence of PCI and increasing numbers of percutaneous intervention in elderly patients had increased the frequency of complications^(4,5). Previously, broken guidewires, underdeployed stents, entrapped wires, or balloons are described in many cases^(6,7). However, intravascular fragmented angiographic catheters are very uncommon⁽⁸⁾. Re-usage, vessel tortuosity, and aggressive manipulation may be related to catheter fracture. Catheter re-usage was not an issue in this case, but the operator performed aggressive manipulation because of extreme iliac vessel tortuosity. Fragmented guiding catheter remain in aorta results dissection, thrombosis, or limb ischemia. Removal of an intravascular foreign body may require surgical intervention or non-surgical retrieval. Percutaneous extraction of intravascular foreign bodies with a snare has been used for many years^(9,10). In our case, the fragmented catheter was inserted into the femoral vascular sheath by a snare. A broader sheath was replaced for

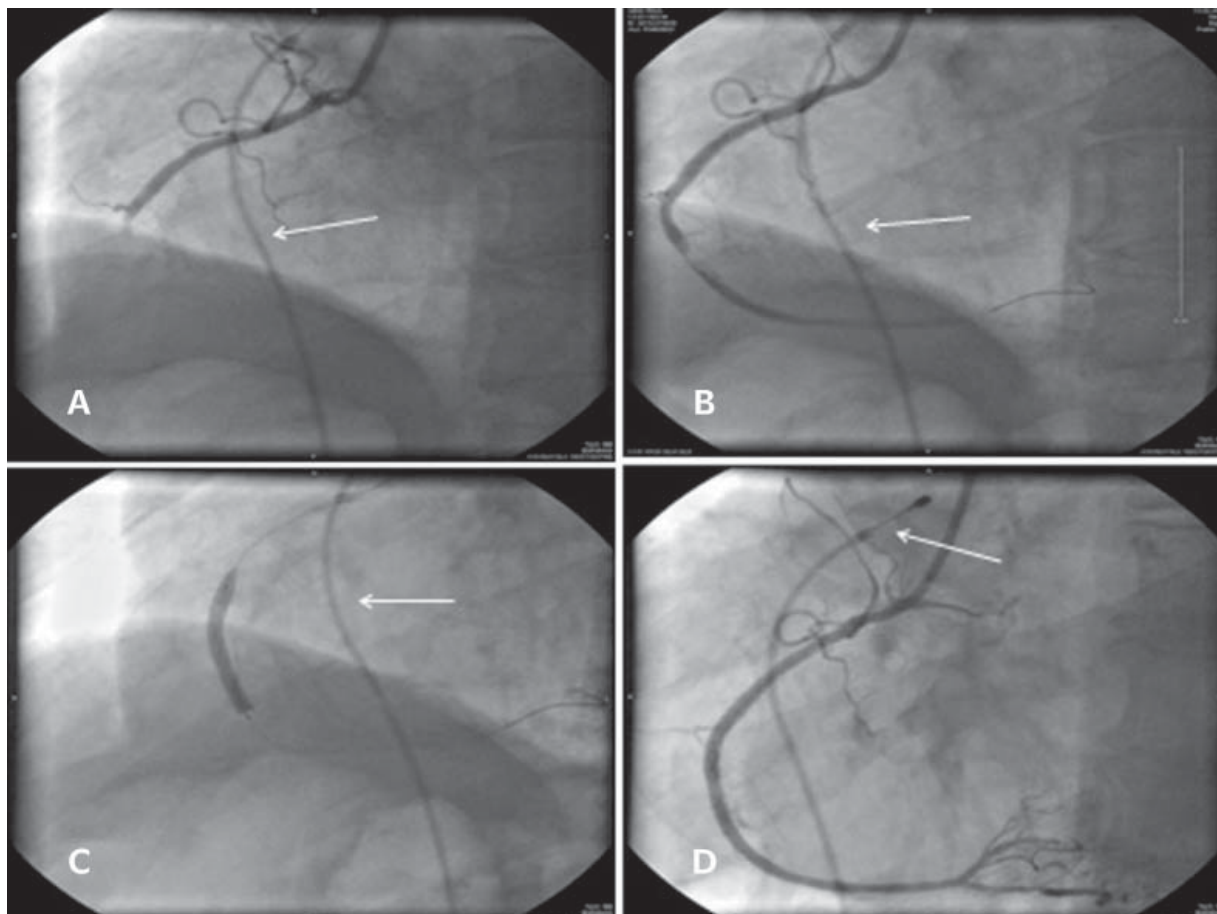


Figure 2. (A) Right coronary injection showing occlusion in the mid-segment, (B) Angiographic view after predilatation with a 2.0 × 20 mm balloon, (C) 3.5 × 32 mm stent placement, (D) final angiographic result. Arrow: The lead of the temporary transvenous pacemaker.

easier extraction. However, the catheter could not be extracted, and the catheter was removed successfully with minor femoral exploration.

CONCLUSION

We report a case of complete fracture of the guiding catheter in the descending aorta during transfemoral coronary intervention. Multiple maneuvers such as the use of a snare and minor femoral artery surgery were used, and the fragmented catheter was retrieved successfully through the femoral artery. Percutaneous intervention should be performed more carefully by experienced physicians in elderly patients.

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