

Balloon-assisted tracking for challenging transfemoral percutaneous coronary intervention: a case report

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Received 18 January 2018; accepted 8 March 2018; online publish-ahead-of-print 20 April 2018

An 81-year-old man with previous coronary artery bypass grafting was admitted to our hospital for non-ST-segment elevation myocardial infarction, and he was transferred to the cathlab to perform urgent coronary catheterization. Radial access was not considered because of unknown grafts number and anatomy. After a straightforward 6 Fr femoral artery access, it was not possible to advance the 0.035" J wire in the descending aorta. Even attempts with 0.035" hydrophilic Terumo® Radifocus® Guidewire M were ineffective, and the angiography showed a severe stenosis of the ipsilateral iliac artery (Figure 1A). After several efforts, we advanced a 0.014" Terumo® Runthrough® NS floppy coronary wire beyond the stenosis but gentle attempts to advance the diagnostic catheter failed. After positioning the floppy guide wire in the descending aorta, a 1.5 × 20 mm balloon was inflated at 8 atm partially out from the tip of the diagnostic catheter. Then, the diagnostic catheter was advanced beyond the stenosis (balloon-assisted tracking technique¹; Figure 1B, Supplementary material online, Video S1). After that, percutaneous coronary intervention was performed on degenerate venous free graft for left coronary circumflex artery (Figure 2). Finally, aortography confirmed an abdominal aortic aneurism with a tight stenosis of proximal right iliac artery (Figure 1C, Supplementary material online, Video S2). The balloon-assisted tracking (BAT) technique was developed to overcome difficulties of transradial access, where arterial spasm and tortuosity may play a major role, rather than tight focal atherosclerotic disease. The application of BAT technique in the femoral setting could be a useful technique to increase support of the

0.014-inch wire allowing a safer catheter advancement, so minimizing risk of vascular damage and reducing the need of an alternative arterial access. Its use should be limited to extreme conditions, when a more supportive guide cannot be positioned beyond a stenotic or tortuous arterial segment. To our knowledge, this is the first report of useful BAT in districts others than arteries of the arm.

Supplementary material

Supplementary material is available at *European Heart Journal - Case Reports* online.

Acknowledgements

The authors would like to thank Mr Salvatore Spanu for his graphical support.

Consent: The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.

Conflict of interest: none declared.

Reference

1. Patel T, Shah S, Pancholy S, Rao S, Bertrand OF, Kwan T. Balloon-assisted tracking: a must-know technique to overcome difficult anatomy during transradial approach. *Catheter Cardiovasc Interv* 2014;**83**:211–220.

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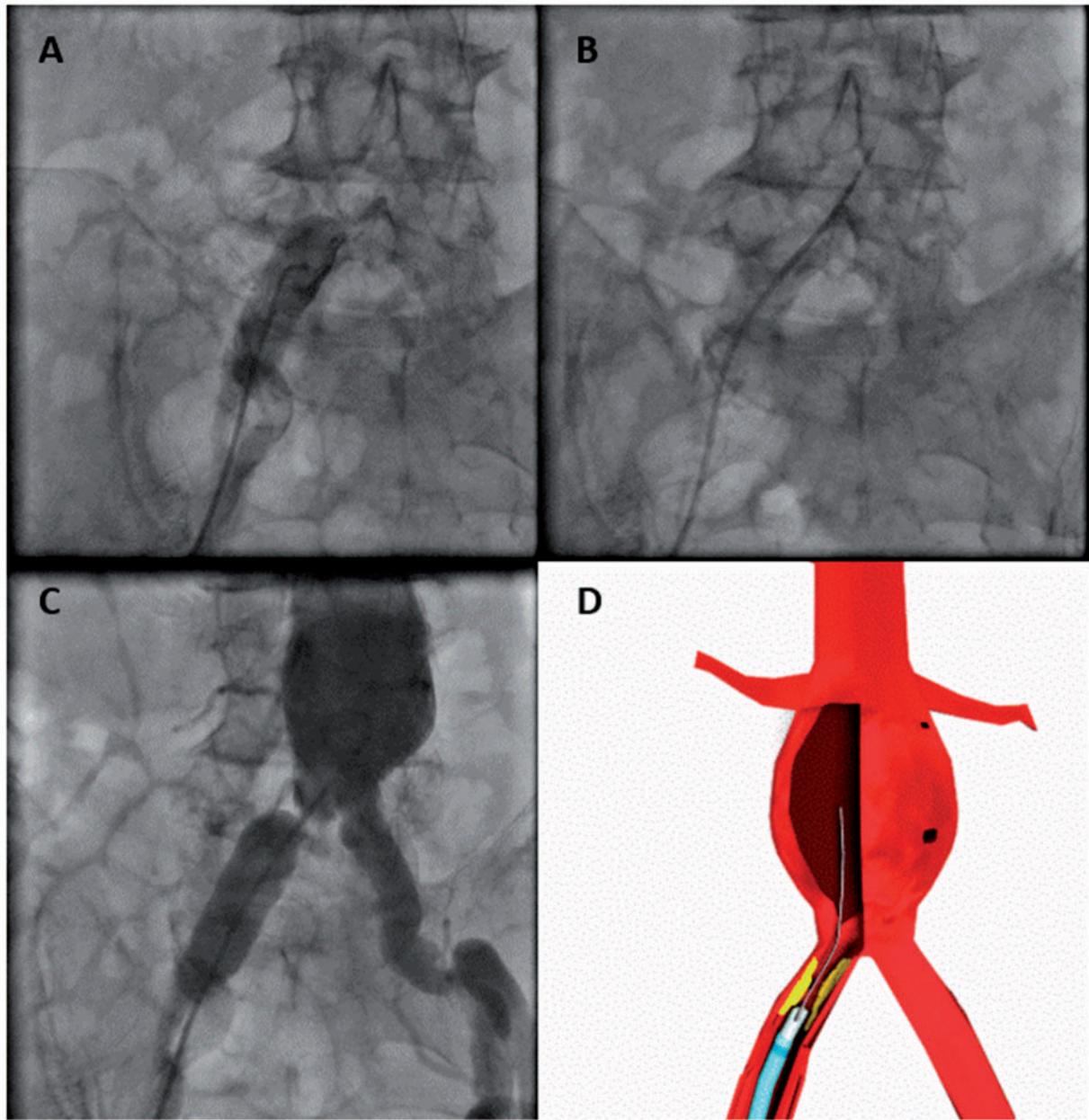


Figure 1 Balloon-assisted tracking of tight stenosis of right iliac artery. (A) Severe stenosis of proximal right iliac artery. (B) Balloon-assisted tracking through right iliac artery. (C) Abdominal aortic aneurism with tight stenosis of proximal right iliac artery. (D) Schematic representation of femoral balloon-assisted tracking.

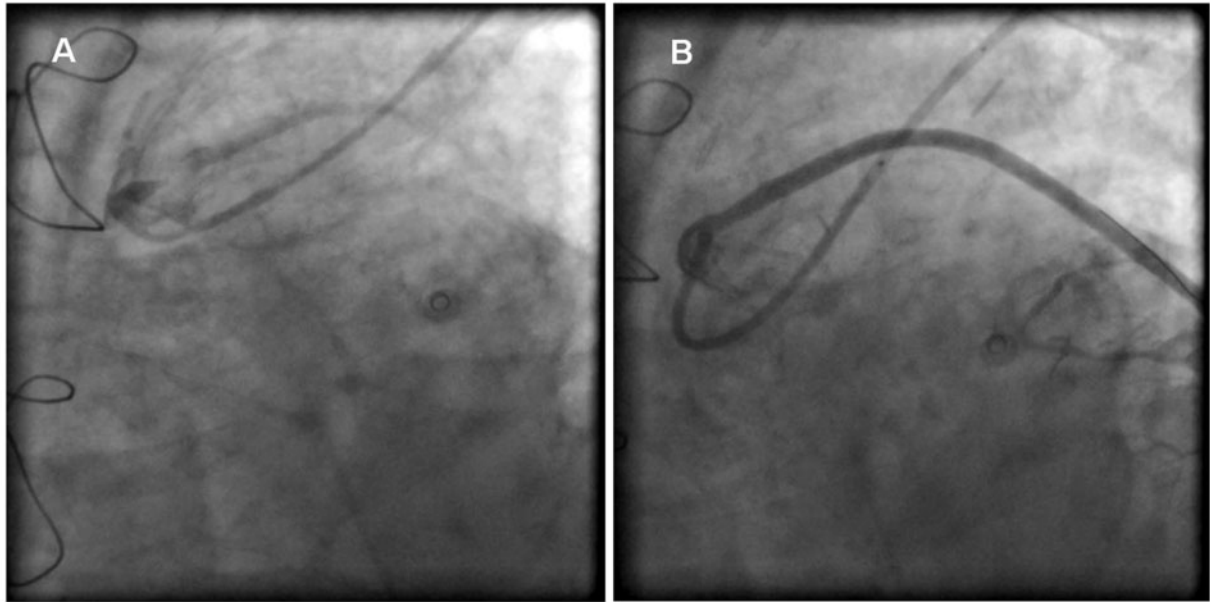


Figure 2 Percutaneous coronary intervention at culprit lesion on degenerate free graft. (A) Degenerate venous free graft for left coronary circumflex artery. (B) Final result after stent implantation.