‘Flower’ guiding catheter makes it possible to retrieve a ‘flared’ stent

Shinichi Nakamura, Taku Rokutanda, Hirofumi Kurokawa, Yoshirou Onoue

DESCRIPTION

A 78-year-old man presented with effort angina pectoris. Coronary angiography revealed a diffuse 75%–90% stenosis with calcification in the mid-left anterior descending artery.

In advanced stenotic lesions with calcifications, coronary stents can be stacked even after frequent predilatations. It was possible to move the stent from the coronary artery to the aortic side by sufficiently retracting the guiding catheter and integrating the stent and guidewire. The management chart for coronary stent loss complications has been described.1 However, the proximal end of the stent became flared, making it difficult to fit within the guiding catheter. One case report described a deformed stent-balloon assembly not being able to be retrieved into the guiding catheter due to its small diameter, therefore, an alternative femoral artery approach using a shortened guiding catheter to snare and pull out the deformed stent.2

We wanted to retrieve the deformed stent without any further puncturing or devices. Therefore, the guiding catheter and stent were integrated and brought into the right upper arm. Subsequently, only the guiding catheter was pulled out of the sheath placed in the right radial artery. Using an ophthalmic cooper scissors, 4–5 cuts were placed only in the soft tip of the guiding catheter and then this ‘flower’ guiding catheter was placed back into the sheath. By positioning the flower guiding catheter near the ‘flared’ stent and slowly pulling on the flared stent, it was possible to cover the flared portion at the proximal end of the stent with the soft tip of the flower guiding catheter with a notch (video 1). When the guiding catheter was pulled out slowly, it was possible to retrieve the stent into the sheath (figures 1 and 2).

The flower guiding catheter made it possible to retrieve the flared stent, and this method was effective because it was possible with existing devices.

Learning points

► Infrequently, the proximal end of the stent can become flared, making it difficult to fit within the guiding catheter.
► A flower guiding catheter makes it possible to retrieve flared stents.

Figure 1 The guiding catheter’s soft tip with incisions: ‘flower’ guiding catheter.

Figure 2 The proximal end of the stent is flared: ‘flared’ stent.

Video 1 The flower guiding catheter makes it possible to retrieve flared stents.
interpretation. All authors approved the final version of the manuscript and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Next of kin consent obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

ORCID ID
Shinichi Nakamura http://orcid.org/0000-0002-1495-6981

REFERENCES