

Balloon crush the protruding everolimus-eluting stent for isolated coronary stenosis at side branch ostium: case series

Saga Medical Center Koseikan, Japan

Yasuhiro Nakano

[Aims] A novel technique named as shoulder technique was recently reported to treat isolated side branch ostial lesions, which is crushing the protruding side branch stent segment against the main vessel wall with inflating main vessel balloon. The Promus Element stent (Boston Scientific), which can be deformed easily, thus may be suitable for the side branch stent in this technique.

[Methods & Results] Consecutive 7 patients with the isolated side branch stenosis underwent stent deployment with the technique. After pre-dilation, a Promus Element stent was positioned in the ostial lesion with a few mm protrusion to the main vessel, while a protection balloon was placed in the main vessel concurrently. After deployment of the stent, the protection balloon was inflated to crush the protruding stent segment. After rewiring of the side branch, the side branch ostium was dilated with a balloon. Target lesions were 4 diagonal branches, 1 intermediate branch, 1 right posterior descending branch, and 1 distal circumflex artery. All procedures were successful, and used stent sizes were 2.5 ± 0.25 mm in diameter and 13.7 ± 3.1 mm in length. Findings of fluoroscopy, IVUS or OCT revealed protruding stent segment was crushed without affecting the main vessel flow. Although stent apposition at the ostium was incomplete after the crushing with the main vessel ballooning, the side branch dilation improved the apposition. Follow-up coronary angiography in 5 patients revealed no in-stent restenosis.

[Conclusion] Shoulder technique using Promus Element stent might be feasible to treat isolated side branch ostial lesions.