Modified anchor technique for stenting of ostial stenosis of the main arteries of the head

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Disclosure

Speaker name:
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I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
Segments of main arteries of head, which can be problematic for precise positioning and implantation of balloon-expandable stents

- Ostium of common carotid artery
- Ostium of subclavian artery
- Ostium of vertebral artery
- Ostium of brachiocephalic artery
Probable delay complications caused by stent malposition in ostial localization

• Stent deformation (sandglass type) and stent crashing
• Stent thrombosis
• Distal embolization
• Difficulties for performing of further endovascular operations in cases of significant stent prolapse
Refinement of Szabo anchor technique for stenting of the main arteries of the head ostial stenosis

- For minimization of probability of wires interlacing
  - Main wire first, anchor wire follow
  - Usage of Guide catheters with straight tips
- In cases when did wires interlacing happen
  - Carefull turning of Guide catheters
  - Pull anchor wire out until it release from interlacing and then carefully push in it to its previous position.
- We don’t use wires with hydrophilic polimer coating!
  This type of wires can get stuck in the stent cell
- Choice of approach (radial or femoral) determined by the angle between target artery and parent artery
4 years experience in our center

34 operations of stenting of ostial stenosis of the main arteries of the head with usage of the modified Szabo anchor technique were performed

- 2 - right subclavian artery
- 4 - left subclavian artery
- 4 – left common carotid artery
- 2 - brachiocephalic artery
- 22 - stenting of the vertebral artery stenosis.
Case 1

Patient 60 y.o, man
TIA in left ICA,
progressive cognitive impairment

- occlusion of left ICA,
- occlusion right ICA,
- occlusion right VA,
- severe stenosis in the ostium of left VA,
- severe stenosis in initial segment of left subclavian artery
Case 2

Patient 55 y.o, man
Ischemic stroke in the left ICA
and residual period of ischemic stroke in the right ICA

• occlusion of left ICA,
• occlusion right ICA,
• severe stenosis in the ostium of right VA,
• severe stenosis in the ostium of left VA,
• severe stenosis in the right ECA
Case 3

Patient 80 y.o, man
Second ischemic stroke in the left carotid basin

• severe stenosis in the ostium of left CCA
Results

• There were no difficulties with positioning of the stent, cases of displacement of the stent during its implantation.
• The interlacing of target wire with anchor wire was observed in 6 cases and was successfully eliminated by rotation of the guide catheter in 3 cases and by pulling out of the anchor wire in 3 cases.
• In one case stent slipped down from balloon-catheter and then it was brought out by the microsnare. In this case a stent from another manufacture was implanted.
• In the all cases stenosis are eliminated with the precise positioning of the stent.
• Good functional results were achieved in 100% of cases.
Conclusion

The modified anchor stenting technique of ostial stenosis of the main arteries of the head allows to achieve optimal results due to ultra-precise positioning of the stent.
Modified anchor technique for stenting of ostial stenosis of the main arteries of the head

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