Z. Ruzsa[1], K. Bihari[2], E. Palinkas[2], S. Nardai[1], B. Nemes[1], B. Merkely[1], **[1]Semmelweis University, Heart Center - Budapest - Hungary**, [2]County Hospital of Kecskemet - Kecskemet – Hungary:

Transradial carotid artery stenting using mesh stents in acute carotid syndrome

Abstract: P4306

Transradial carotid artery stenting using mesh stents in acute carotid syndrome

Authors:
Z. Ruzsa[1], K. Bihari[2], E. Palinkas[2], S. Nardai[1], B. Nemes[1], B. Merkely[1], [1]Semmelweis University, Heart Center - Budapest - Hungary, [2]County Hospital of Kecskemet - Kecskemet - Hungary,

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Background: Acute carotid syndrome is defined as a set of signs and symptoms linked to neurological deficits (TIA or ischemic stroke) caused by carotid occlusive disease. Endovascular treatment is a viable alternative of the surgical endarterectomy in acute carotid syndrome, but the timing is controversial because the intervention can convert the ischemic stroke into haemorhagic one and the intervention can cause distal embolization.

Aim: Our aim was to investigate the outcomes of the transradial carotid artery stenting in ACS and to compare the results with the elective carotide artery stenting (CAS).

Methods: The clinical and angiographic data of 290 consecutive patients high risk for carotid endarterectomy treated by CAS with cerebral protection between 2013 and 2016 were evaluated. We have compared the patient interventional data and procedural outcomes between the patients underwent elective and acute carotid artery stenting. ACS patients were treated with newly designed mesh stents (Roadsaver, CGuard). Several parameters were evaluated: Primary endpoint: angiographic outcome of the CAS and MACCE. Secondary endpoint: fluoroscopy time and X Ray dose, procedural time, cross over rate to another puncture site, rate of access site complications and hospitalisation in days.

Results: Procedural success was achieved in 278 elective and 16 ACS patients (100%). The cross over rate was 1.4% in the elective and 0% in the ACS group (p=ns). Major access site complication was encountered in 1 (0.3%) elective and 0 (0%) ACS patient, and the rate of minor access site complication was 8 (2.9%) and 0 (0%) (p=ns), respectively. The incidence of MACCE was 1.4% in the elective and 0.0% in the ACS group (p=ns). Procedure time (1609±465.4 vs. 1673 [1581–1765] sec, p=ns), fluoroscopy time (522.3 [351.1–693.4] vs. 536.5 [496.5–576.5] sec, p=ns), radiation dose (877.2 [568.4–1186] vs. 782.2 [658.6–905.9] mGy, p=ns), contrast consumption (106.4 [92.3–120.7] vs. 111.5 [105.9–117.2] mGy, p=ns), was not significantly different.

Conclusions: The transradial approach for acute carotide artery stenting has the same efficacy and safety as the elective transradial approach with using mesh stents.