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P5.20: MEASURE OF CHANGE IN CAROTID-RADIAL PULSE WAVE VELOCITY AFTER REACTIVE HYPERAEMIA

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In conclusion, carPP values obtained with the accelerometric device are in good correlation with those calculated with standard applanation tonometry. Therefore, the proposed approach, providing an easier and more available measurement, could represent a valid alternative to existing and used technique for carPP assessment.

P5.18

TRANSRADIAL APPROACH FOR VERTEBRAL ARTERY STENTING: SINGLE-CENTER EXPERIENCE

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Objectives: Transradial vertebral artery (VA) angioplasty might be a viable alternative to the transfemoral approach in cases of peripheral artery disease or anatomical variations of the aortic arch. The purpose of our study was to evaluate the safety and efficacy of transradial stenting of symptomatic VA stenosis.

Material and methods: Seventeen patients [67±8,4 years, 76% men, with >80% stenosis, 13 right-side, all symptomatic from posterior circulation (history of stroke, TIA or chronic ischemic symptoms)] with peripheral artery disease (PAD) or unsuccessful attempt via femoral access were scheduled for VA angioplasty by radial approach. Clinical and duplex ultrasound (DUS) follow-up were performed before discharge and 6, 12 and 24 months after VA stenting.

Results: The technical success rate was 100%. In all cases VA angioplasty was performed with the use of single balloon-mounted stent (11 bare metal stents, 6 drug eluting stents). The mean NASCET VA stenosis was reduced from 87,5% to 5,9% (p<0.001). No periprocedural death, stroke, myocardial infarction or transient ischemic attack occurred. During 24-months follow-up in 14 of 17 patients chronic ischemia symptoms release was observed, no new acute ischemic neurological symptoms were diagnosed in all patients. One patient died 20 months after intervention from unknown cause. There was one, symptomatic border-line VA in-stent stenosis 12 months after angioplasty.

Conclusion: Transradial VA stenting may be effective and safe procedure and it may constitute an alternative to femoral approach in patients with symptomatic vertebral artery stenosis.

P5.19

TRANSRADIAL APPROACH FOR CAROTID ARTERY STENTING: SINGLE-CENTER EXPERIENCE

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Objectives: The transfemoral approach is commonly used for carotid artery stenting (CAS) however in cases of severe peripheral vascular disease or unfavorable aortic arch anatomy, the transradial access remains a viable alternative. We report a series of patients with aorto-iliac disease or unsuccessful attempt via femoral access in whom transradial carotid artery stenting was performed.

Material and methods: Sixteen patients (69±10,7 years, 75%men, with >70% stenosis, 10 left-side, 5 contralateral carotid occlusion, 9 with history of stroke or TIA) with peripheral artery disease (PAD) or unsuccessful attempt via femoral access were scheduled for carotid artery angioplasty by radial approach. Clinical and duplex ultrasound (DUS) follow-up were performed before discharge and 1, 12 and 24 months after carotid artery stenting.

Results: The technical success rate was 87,5%. In two cases attempt via femoral and radial access were unsuccessful and the patients were treated by endarterectomy. In other cases CAS was performed with self-expanding bare metal stents. The mean NASCET carotid artery stenosis was reduced

from 85% to 9,6% (p<0.001). No periprocedural death, stroke, myocardial infarction or transient ischemic attack occurred. During 24-months follow-up no new acute ischemic neurological symptoms were diagnosed in all patients. One patient died 2 months after intervention due to deterioration of chronic obstructive pulmonary disease.

Conclusion: Transradial carotid artery stenting may be safe and useful alternative when femoral approach is difficult or impossible.

P5.20

MEASURE OF CHANGE IN CAROTID-RADIAL PULSE WAVE VELOCITY AFTER REACTIVE HYPERAEMIA

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The recognized reference method for endothelial function assessment is brachial artery diameter echo-tracking during flow mediated dilation (FMD) induced by reactive hyperaemia (RH). From the Mons-Korteweg equation, FMD should also reduce upper limb pulse wave velocity (PWV). The aim of our study was to compare echo-tracking FMD with PWV changes after RH. Brachial diameter was assessed by echo-tracking (MyLab 70, Easote, Italy) before and after 7 min of ischemia induced by inflating a cuff on the right wrist 50mmHg above subject's systolic blood pressure. Carotid-left radial and carotid-right radial PWVs were also simultaneously measured with Complior Analyse (Alam Medical, France) at baseline (in triplicate), 30sec, 1, 3 and 5 min end of ischemia.

Measurements were performed in 15 healthy subjects (10M/5F, 31±11 yrs). Maximum PWV changes happened 1min after cuff deflation in the ischemic arm (Δ PWV=2,1±1,4m/s, p<0,001) while changes in the control arm were non-significant.

Time after deflation Δ PWV ischemic arm Δ PWV control arm

30sec -0,6 ± 0,6 -0,2 ± 1,0

1min -2,1 ± 1,4 * -0,1 ± 1,1

3min -1,9 ± 1,4 * -0,1 ± 1,2

5min -1,7 ± 1,3 -0,7 ± 2,5

*p<0,001

The maximal change in arterial diameter post-RH was 5,1±4,7%. There was no correlation between diameter change and Δ PWV (R=0,03, p=0,91).

While the use carotid-radial PWV seems promising to track changes post RH, further studies are needed to better understand this phenomena which is not related to diameter change.

P5.21

PERCUTANEOUS CORONARY INTERVENTIONS OF CHRONIC TOTAL OCCLUSIONS: GENDER DIFFERENCES – SINGLE CENTER EXPERIENCE

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Background: Little is known about gender differences among patients undergoing percutaneous coronary intervention (PCI) for chronic total occlusion (CTO).

Methods: A total of 242 patients underwent 255 procedures PCI of CTO in our center between January 2011 and January 2015. Demographic data, procedural differences and success rate between genders was compared.

Result: Among 242 treated patients 16,9% (n=41) were women. Women were older than men (67.8±8.4 vs. 61.3±9.0, p<0.005, respectively). There were no differences in diagnosis of hypertension (92.7% vs. 85.6%), dyslipidaemia (100% vs. 99%) or diabetes (34.2% vs. 28.4%)(p=NS). Less women were current smoker (7.3% vs. 23.4%, p<0.005). 46.1% of women and 50.8% of men suffered from myocardial infarction before procedure (p=NS). The most frequently opened artery in both groups were right coronary artery (45.2% vs. 49.8%), then left anterior descending artery (40.5% vs. 31.5%) (p=NS). Occlusion's characteristic did not differ in both groups in estimated duration (10.9±19.5 vs. 16.6±33.1 months) and length (27.0±14.0 vs. 26.9±11.8 mm), (p=NS). Retrograde technique was used in 10 women (23.8%) and in 46 men (21.6%) (p=NS). Time of procedure (minutes) (71.4±27.9 vs. 69.3±33.4), fluoroscopic time (minutes) (25.7± 15.2