(P3)Carotid T occlusion stroke. A proposal of a multidisciplinary microvascular study

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Background: It has well known from the recent years that the identification of the occlusive pattern in the acute phase of stroke, as can be made by TCCS, gives prognostic information. One of the worse prognoses is associated with carotid T-type occlusion and the response to recanalization strategies is very poor.
Methods: In the population admitted to Stroke Unit, we evaluated the occlusive pattern in the acute phase by ultrasound examination of SupraAortic Trunks and TCCS with UCA for perfusional examination. T occlusion was diagnoses according to the literature criteria and in a few cases the neurosonological diagnosis was confirmed by neuroradiological techniques, like as CTA or DSA. In a very small sample of these patients also perfusional CT was performed and data on main parameters were compared between perfusional ultrasound study and neuroradiological study.
Results: The treatment of this subgroup is not a goal of our work, but with conventional treatment only two patients achieved a complete recanalization at one hour from the treatment. Perfusional parameters were more markedly impaired in the affected hemisphere in all patients who died than in survivors with both techniques and no recanalization was found in the former unless a partial and late reperfusion.
Conclusion: TCCS in the acute phase of stroke can help to predict prognosis and the perfusional data can improve the reliability of these information, but the comparison with other perfusional techniques can be useful in order to define the role of this tool and therefore we propose to follow this way for the future.

(P4)The correlation between carotid artery atherosclerotic unltraonographic findings with middle cerebral artery infarction subtype and localization

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Aim.To evaluate atherosclerotic changes in carotid arteries (CA), the clinical competence of ultrasonografic (US) evaluation data for detecting Middle Cerebral Artery (MCA) infarction subtype and main pathogenetic factors.

Material and Methods.US examinations were performed on 585 patients of the Stroke Unit, comprised of 428 with atherotrombotic cerebral infarctions (ATCI) and 157 with cardioembolic cerebral infarctions (CECI). The carotid artery I-M thickness, plaque stability, artery stenosis and occlusion US finding criteria were evaluated and specified with cerebral infarction (CI) ipsilateral, heterolateral or bilateral localization. Examinations were performed with PHILIPS IU 22 ultrasonography equipment.
Results.I-M thickening as the only sign was 11,5 % more often for patients with CECI than ATCI, but stable plaques with stenosis < 50% were found equally often for both CI subtypes -31% and 32 %. CA stenosis >50% ATCI was found 10% more often ($p<0,001$) than CECI and was detected in 13,8 % of ATCI patients. Occlusions were 10% in ATCI and 8,9 % in CECI, but unstable plaques for ATCI and CECI groups did not differ significally - 26,6% and 24,8%. For both CI subtypes US atherosclerotic data were more often bilateral -63,2% ATCI and 58,6% CECI. US findings in other ATCI cases were equally often ipsi- and heterolateral compared to the localization of CI, but only >50 % were ipsilateral for CECI stenosis.
Conclusion.The carotid artery atherosclerotic US findings show the systemic nature of atherosclerosis for ACM stroke patients but are not sufficient as diagnostic criteria for ATCI from CECI and cannot be used with certainty for the determination of main pathogenetic factors.

(P5)Urgent assessment of Transient Ischemic Attacks (TIA): the "Day-TIA"- Italian pilot study

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Background. TIA precedes about 15% of strokes and represents a special opportunity for prevention. Its management in clinical practice is often suboptimal. We aims to evaluate the effects (stroke rates compared to expected ones on ABCD2 score risk levels) of urgent assessment of patients with presumed TIAs in the setting of a neurovascular unit.
Methods. We followed a management pathway according to the risk score and the timing of TIA (index event) and studied prospectively a cohort of consecutive patients presenting with TIA to the emergency department and therefore sent to neurologist's attention. All patients underwent to protocol evaluation that included clinical neurological assessment, brain imaging with unenhanced CT,; duplex ultrasonography

of supraaortic trunks and TCCS, 12 leads-EKG and blood samples. Endpoints were stroke within 2, 7, 90 days, 1 year and stroke, myocardial infarction, and vascular death within 1 year.

Results. Between September 2008, and February 2009, we studied 100 patients with suspected TIA. At neurosonological evaluation 16 patients had (16%) an ipsilateral carotid occlusive disease, 9 (9%) had one or more intracranial stenosis. 3 patients (3%) underwent to urgent carotid revascularization by CEA. In 2 patient the cause of TIA was a carotid dissection. Fifhteen patients (15%) have an atrial fibrillation as a cause of cerebrovascular symptoms.

Conclusion. These initial findings support the hypothesis that use of an urgent neurovascular evaluation with neurosonology for TIA patients might greatly reduce stroke risk, in comparison to the expected risk as defined by the ABCD2 score, and length of hospital stay.

(P6)Ultrasonic evaluation of embolic mechanism for pathogenesis of transient ischemic attacks

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Background: Embolism is one mechanism of transient ishemic attacks (TIAs). **The aim** was ultrasonic examination of embolism for pathogenesis of TIAs, artery to artery, cardiac and paradoxal embolism, especially.

Method, patients: We investigated 100 patients with TIAs by color doppler flow imaging of carotid and vertebral arteries, detection of microemboli signals (MES), detection of right to left (R-L) cardio-pulmonal shunts (bubble test) and transthoracal echo-cardiography (TTE); transesophageal echocardiography (TEE) was done in patients with positive bubble test.

Results: There were exulcerated plaques in 15% patients, with lipid structure and stenosis from 25% to 55%. Bubble test was positive in 41% patients; in 12% patients it was cardiac type, with patent foramen ovale in 5%, which were confirmed by TEE; in 29% patients R-L shunt was pulmonal type, with great shunt (III and IV gradus) in 9%. TTE and TEE showed left atrial thrombus as source of thromboembolism in one patient.

MESs were detected in 22% patients: in 10% unilateral (exulcerated plaques) and 12% bilateral (one patient with atrial trombus, 5 with patent foramen ovale and 6 with great pulmonal R-L shunt). MES didn't detect in all patients with exulcerated plaques and paradoxal embolism during monitoring, but it didn't exclude embolism.

Conclusion: We found that 30% had conditions for emboligenic mechanism of TIA: artery to artery embolism (15%), cardiogenic embolism (1%), patent foramen ovale (5%) and great pulmonal R-L shunt (9%). The numerous R-L cardial and pulmonal microshunts were not important for TIA, probably.

(P7)Ultrasonic correlative study of embolic mechanism for pathogenesis of transient global amnesia and transient ischemic attacks

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Background: The role of embolism for pathogenesis of transient global amnesia (TGA) was taken in consideration with idea that there were similar disorders as in transient ischemic attack (TIA).

The aim was to compare ultrasonic embolic parameters for TGA and TIA.

Method, patients: We investigated 50 patients with TGA and 100 patients with TIAs by Color Doppler flow imaging of magistral neck arteries, transcranial Doppler (TCD) detection of microemboli signals (MES), TCD detection of right to left (R-L) cardio-pulmonal shunt with air contrast (bubble test), transthoracal echocardiography (TTE) and transesophageal echocardiography (TEE) in patients with positive bubble test.

Results: We found that exulcerated plaques were significant less frequent in patients with TGA (2/50) than in patients with TIAs (15/100) ($p<0.001$). MESs were detected significant less frequent in TGA patients (8/50) than in TIA patients (22/100) ($p<0.001$). Bubble test was significant less frequent in TGA patients (7/50) than in TIA patients (41/100) ($p<0.001$). By TEE we confirmed only one potent foramen ovale in TGA patients and 5 in TIA patients ($p<0.01$). The numerous bubble tests were positive because D-L cardio-pulmonal microshunts were present, but they had not clinical importance. There was not cardiac source of embolism in TGA patients; there was left atrial thrombus in one TIA patient.

Conclusion: We found that ultrasonic embolic parameters were significant less frequent in TGA than in TIA patients.