between the surface area of the lesional ROI (measured at the frame correspondent to the echogenicity peak in the time-intensity curve) and the surface area of brain tumor in the T2-weighted MRI at the nearest axial scanning plane. A good concordance was found between the neurosonological and neuroradiological techniques in the area evaluation. The ultrasound perfusional examination showed a markedly higher echogenicity in the brain tumors than in the healthy tissue.

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US Parenchymal Evaluation of an Heavy Metal Poisoning

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A young 22 years georgian man old was addressed to the neurological evaluation because of the progressive developing of general symptoms, followed by tremors, dysarthria, unsteadiness with marked gait imbalance, slowing of movement and thinking. His past history was significant for eroine abuse, HCV hepathopathy. The neurological examination showed an extrapiramidal syndrome associated with neuropsychiatric signs (executive and visuospatial disfunction) and the patients underwent to a complete diagnostic and neuroradioligical work-up. A TCCS was made because of the extrapiramidal signs in order to evaluate the nigrostriatal pathways functionality and the findings were bilaterally the following:

- a markedly increased area of the substantia nigra echogenicity
- a dot-like appearance of thalamic hyperechogenicity
- a mild lenticular hyperechogenicity
- a normal ventricular system size

These abnormalities were indicative of a functional impairment of the nigrostriatal pathways and were confirmed by the brain MRI examination, that showed a signal hyperintensity in the T1-weighted sequences at the level of pallidal nuclei and substantia nigra. The diagnostic work-up for the Wilson disease was negative and the toxical assestment was positive for a markedly increased blood leves of manganese. The source of poisoning was the voluntary intravenous administration of a self made moisture of oximetazoline, salicylate, potassium permanganate, warm water and other substances. There are few reports in the recent literature of manganese poisoning by this self made abuse but this is, at our knowledge, the first description of ultrasound brain parenchymal abnormalities in manganese poisoning, similar to the copper toxicity effects in Wilson disease.

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A Life Threatening Transient Ischemic Attacks Series in an Older Patient

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A 89 years old patient underwent to a urgent neurological evaluation because of the occurrence, in the last three days, of transient weakness in the right arm and face of 30' duration and recurrent only after dinner. Her past medical history was significant for hypertensive heart disease chronic legs arteriopathy. No abnormalities were found at the neurological examination and unenhanced brain CT scan, but the neurosonological evaluation of the supraaortic trunks and Willis circle (TCCS) showed indirect signs of left internal carotid artery (ICA) stenoocclusion in the intracranial segment and diffuse intracranial atherosclerotic disease (right C1 ICA and MCA stenosis and basilar artery stenosis). A TCD monitoring was performed and showed 20 HITS in the left MCA in 30' and therefore a dynamic autoregulation testing with breath holding found a steal phenomenon on the left MCA. Medical treatment was started with a dual antiplatelet regimen and a LMWH, but in the following days several others TIAs occurred and finally the patient died for an acute myocardial infarction. No vascular imaging techniques other than TCCS were used because a mild kidney failure and the difficult supine staying for the shortness of breathing.

Then TCCS is a useful diagnostic toll in the acute phase of cerebrovascular accidents, even with conventional vascular imaging is contraindicated or not performable. TCCS findings are significant in predicting prognosis.

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Patterns of Infaction in Internal Carotid Atheromatosis

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The mechanism of internal carotid artery disease ischemic infarct is unclear. Classical classifications of territorial, watershed and lacunar infarcts suggest different pathophysiology to their explanation. We've correlated the cervical triplex scan findings and image characteristic from all consecutive patients referred to our Lab (LUSCAN) to perform cervical triplex scan from 1st January 2005 to 31st July 2007. We've se-