

Carotid intima-media thickness and plaques in hiv infected men: Association with antiretroviral treatment.

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Aim: Evaluate HAART effect on carotid intima-media thickness (IMT) and plaques in HIV-infected males.

Methods: Male patients with HIV infection were included, and classified by HAART group: naïve, protease inhibitors (PI)-containing HAART, and non-nucleoside reverse transcriptase inhibitor (NNRTI)-containing HAART, never exposed to PI. Internal, bifurcation and Common Carotid artery (CCA) IMT and plaques were evaluated by ultrasound according to Mannheim IMT consensus in a cross-sectional analysis.

Results: Study included 89 patients, mean age $42,1 \pm 8.3$ SD. Time of HIV infection was 7.9 ± 5.6 years. Total HAART time was $67,2 \pm 4.8$ months. Maximum CCA IMT in naïve, NNRTI and IP was (mean \pm SD) 0.700 ± 0.085 , 0.757 ± 0.113 and 0.788 ± 0.167 mm respectively (naïve vs NNRTI $p=0.09$; naïve vs IP $p=0.06$; HAART vs naïve $p=0.06$). Median value of mean CCA IMT in naïve, NN and IP was 0.537 (0.487-0.610), 0.600 (0.562-0.645) and 0.620 (0.546-0.713) respectively (naïve vs NNRTI $p=0.009$; naïve vs IP $p=0.008$; HAART vs naïve $p=0.004$). No differences were found between NNRTI and PI maximum or mean carotid IMT. Age, smoking, time of HIV infection, total time on HAART, total time with PI, total time with NRTI weight, body mass index, waist to hip ratio, triglycerides were positively correlated with carotid IMT ($p<0.05$). At least one plaque was found in 24 patients: 1 naïve, 9 NNRTI and 14 PI ($p=0.09$).

Conclusion: HAART, and PI containing regimens in particular, are associated with higher carotid IMT and presence of plaques in HIV infected patients compared to naïve HIV infected patients.

SESSION VIII

Correlation between substantia nigra characteristics detected by ultrasound and Parkinson's disease symptoms

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Background: The aim was to assess the correlation between substantia nigra (SN) echogenicity and area, and the clinical symptoms in patients with Parkinson's disease (PD).

Methods: Clinical examination and TCS evaluation of the SN were performed in 115 consecutive PD patients. The presence and symmetry of tremor, rigidity, bradykinesia, gait disorders, speech disorders and hypomimia were evaluated using the UPDRS scale. Echogenicity grade III-V and SN area >0.25 cm² were considered as pathological. The Mann-Whitney U-test, Kruskal-Willis test and ANOVA were applied when assessing statistical significance.

Results: An enlarged, hyperechogenic SN was detected in 84.0% patients with bilateral rigidity but only in 70.6% of patients with unilateral rigidity ($p<0.05$). Similarly, 85.0% patients with bilateral bradykinesia in comparison with 65.7% of patients with unilateral bradykinesia had an enlarged, hyperechogenic SN ($p<0.05$). Non-significant differences were found between the SN features in patients with unilateral, bilateral or no expression of tremor, gait disorder, speech dysfunction or hypomimia ($p>0.05$). A slight correlation was detected between the age and SN echogenicity and SN area ($r=0.25$ and $r=0.31$, $p<0.05$, respectively). There was no correlation between SN features and duration of the disease, used medication or duration of L-DOPA treatment. A significant correlation was demonstrated between the SN echogenicity and the SN area ($r=0.705$, $p<0.01$).

Conclusions: An enlarged, hyperechogenic SN seems to be a marker of structural involvement of SN in patients with PD, which correlates with the manifestation of clinical symptoms, i.e., bilateral rigidity and bradykinesia.

Brain Parenchyma Sonography Findings in a case of suspected oromandibular dystonia

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The clinical usefulness of Brain Parenchyma Sonography in the diagnostic process of diseases of the extrapyramidal system is nowadays well known and accepted. It is true mainly on differential diagnosis of Idiopathic Parkinson Disease versus atypical parkinsonian syndromes (PSP and MSA), but there are

in the literature a few reports also for the diagnostic pathway of dystonia, particularly focal dystonia as writer's cramp and seldom oromandibular dystonia. We describe the case of a young woman with symptoms reasonable for oromandibular dystonia, treated with tetrabenazine without success. Instead the patient complains the onset of subcontinuous orofacial dyskinesia and a gait pattern of difficult interpretation, with features of hypertonic legs and a creeping gait. The clinical examination leaves the suspicion of non organic genesis of the symptoms, making unsure also the interpretation of the previous diagnosed oromandibular dystonia. The patient underwent to spinal and cerebral MRI, without relevant findings. Therefore we use a neurosonological approach, with Brain Parenchyma Sonography and a complete parenchyma evaluation in the mesencephalic, diencephalic and ventricular plane, in fundamental and second harmonic. The findings of this technique were the following:

- area of hyperechogenicity of substantia nigra at the superior limits of the normal range, bilaterally
- dotted hyperechogenicity of the left lenticular area

Then the previous diagnosis of oromandibular dystonia was confirmed on the basis of neurosonological findings.

Can suicidal risk be disclosed by transcranial sonography (TCS)?

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Aims: Recent TCS studies showed that disruption of echogenic midbrain line corresponding to basal limbic system and raphe nuclei (RN) within might represent functional marker for the development of depression (irrespective of diagnostic category). Also, depression is the most common psychiatric disorder associated with suicidal ideation.

Still there is lack of evidence that, at patients with suicidal ideation, TCS might record same RN alteration. Therefore, we initiated this study to test the possibility of TCS to disclose suicidal risk at patients with major depressive disorder (MDD).

Methods: Altogether 90 subjects: 30 patients with MDD, 30 patients with MDD who also reported suicidal ideation and 30 healthy controls where studied using TCS. Severity of the disease was measured according to Hamilton Depression Rating Scale (HDRS) and clinical global impression scale (CGI). Examination was performed by standardized semiquantitative protocol.

Results: Reduced raphe echogenicity was found in 16 of 30 (53%) of the patients with MDD but only in 6 of 30 (20%)

controls. In patients with suicidal ideations that finding was even more pronounced 22 of 30 (73%), with the highest frequency of completely not visible TCS RN finding 20 of 30 (67%).

Conclusion: Our result showed that hypoechogenicity of the RN is frequent in patients with MDD. Such finding is rare in healthy subjects; however, in suicidal patients that finding was even more pronounced. These results suggest that TCS might be a novel neuroimaging method for screening for suicidal patients within the group of the depressed one.