Alzheimer pathology: decline of glucose utilization, particularly in the hippocampus and enthorinal cortex; increased oxidative stress associated with the synthesis of advanced glycation endproducts (AGE); increased tau protein phosphorylation and neurofibrillary tangle formation; increased aggregation of beta-amyloid protein secondary to the insulin-degrading enzyme (IDE) inhibition. Therapeutic strategies targeted at restoring the balance in insulin metabolism in AD − applying nasal insulin or using thiazolidinedions − are currently in the phase of clinical trials.

P0017

A-Beta Plasma levels and long-term response to rivastigmine in Alzheimer's disease

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Cholinesterase inhibitors (ChEI) are currently the mainstream symptomatic treatment of patients with Alzheimer's disease (AD). To this end, the response to the treatment with ChEI is clinically difficult to predict. Several demographic, clinical and biological variables have been proposed as pre-treatment predictors of long-term therapy efficacy. The aim of this study was to confirm our initial observations of a significance of change in plasma levels of b-amyloid (Aβ) peptides after initial treatment with rivastigmine for predicting clinical response to ChEI. Fifty four carefully selected subjects (37 females) satisfying criteria for mild (N=25) or moderate (N=29) AD were included in the study. Rivastigmine was prescribed at the initial dose of 3 mg/day b.i.d.; the dose was escalated to the maximum tolerated one in at least 4-week intervals. The response to treatment was assessed using ADAS-Cog scale. The whole blood samples were collected twice: before the first rivastigmine dose and at the 2nd week on active treatment. Levels of Ab1-40 and Ab1-42 were measured in plasma using a commercially available ELISA. We confirmed that higher initial disease severity (higher ADAS-Cog scores) and the increase in the concentration of plasma Aβ1-42 peptide following 2 weeks of treatment with an initial dose of rivastigmine increased the chance of a clinically meaningful response to ChEI therapy in AD patients after 2 years of follow-up. To conclude, a change in plasma Aβ1-42 level might constitute a novel biochemical predictor of long-term rivastigmine treatment efficacy in AD.

P0018

APOE, CYP46, PRNP and PRND: Genetic polymorphisms in Alzheimer's disease and mild cognitive impairment

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Background: The only widely confirmed sporadic AD genetic risk factor is carrying the apolipoprotein E ε4 allele. The results of numerous studies on various other genes are highly inconclusive. Genetic studies in mild cognitive impairment (MCI) are scarce.

Objective: To assess the influence of APOE, CYP46, PRNP, PRND genetic polymorphisms on the risk of AD and MCI.

Material & Methods: To date, over 100 subjects with AD, amnestic form of MCI and cognitively healthy age-matched controls have been recruited for the study (ongoing recruitment). To increase the homogeneity of the studied population subjects with prominent comorbid vascular risk factors, family history of dementia or satisfying criteria for non-AD neurodegenerative dementias have been excluded from the study. RFLP and sequencing techniques were employed to assess polymorphic sites in the CYP46, PRNP, PRND and APOE genes.

Results: As expected, the proportion of APOE ε4 carriers was significantly higher in the AD group compared to controls. No statistically significant influence of polymorphisms in the CYP46, PRNP and PRND genes on the risk of AD or MCI was observed. However, the odds ratio for PRNP codon 129 homozygosity was over fivefold higher in the AD group compared to other study groups.

Conclusions: The significance of APOE genotype as an AD risk factor seems to be beyond controversy. The role of other genes putatively involved in the pathobiology of neurodegenerative disorders seems vague at most. Studies on much larger populations are required to estimate true significance of those genetic variants in the etiology of AD.

P0019

Prevalence of Dementia with Lewy Bodies in a communal psychogeriatric inpatient population

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Objective: Data on the prevalence of Dementia with Lewy Bodies (DLB) derive mostly from neuropathological data or community studies. There exist only limited data about the prevalence in the communal geriatric psychiatry service with 3% in a Chinese and 28% in a British study.

Method: We applied the recently revised consensus criteria for DLB, One Day Fluctuation Assessment Scale (ODFAS) and Unified Parkinsons Disease Rating Scale (UPDRS) retrospectively (chart review) (n=58) and prospectively (n=54) on demented patients in a communal psychiatric service in Basel, Switzerland.

Results: Prevalence in the prospective group was 19% and 5% in the retrospective group. The odds ratio between both groups is 5.1. If gender is considered odds ratio for women is 2.4 and for men 6.8.

Conclusions: Our study shows that in communal geriatric psychiatry a high prevalence of DLB is encountered and that prospective use of DLB diagnosis criteria in combination with scales for fluctuation and parkinsonism enhances the detection rate of DLB.

P0020

Risk factors in Alzheimer's disease evolution for patients with MCI

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Background and Aims: The MCI syndrome is precociously present in over 50% of the patients that develop Alzheimer's Disease (AD) in the following three years. The evolution rhythm can be precipitated by the intervention of some risk factors.

Methods: Retrospective study with 30 patients with their case histories and current AD diagnosis confirmed by CT and DSM IV, evolution stage medium to serious. The aim was emphasize risk factors: