binge eating disorder (BED), bulimia nervosa- purging type (BN-P) and bulimia nervosa-non purging type (BN-NP).

Methods: The participants were 102 female patients (34 BED, 34 BN-P and 34 BN-NP), mean age 28.7. Assessment measures included the following tests: EDI-2, BITE, EAT-40, SCL-90-R and TCI-R, and other clinical and psychopathological indices that were collected via semi-structured interview.

Results: When compared all three groups, BED were the oldest group, showed more frequent familial history of obesity and current or lifetime obesity. Regarding psychopathology, BN-P patients showed the most pathological scores, followed by BN-NP patients and BED patients showing the least pathological scores. Specifically, BN-P patients showed statistically higher scores than BED patients on SCL-90-R Paranoid Ideation, EAT-40 total score, EDI-2 Impulsivity subscale, and BITE Severity subscale. No statistically significant differences were observed among groups, on personality traits. A two-step cluster analysis procedure was conducted, to determine the clinical proximity among the three diagnostic groups. The relationship between cluster classification and diagnosis was statistically different ($p<0.001$), so we can assume that the present classification maybe does not classify accurately eating disorders.

Conclusions: Even when BED patients present differential characteristics with respect to family and personal antecedents when compared to BN patients, clinical and psychopathological overlapping with BN-NP makes them similar. Likewise, our results suggest deficiencies in the current nosological system, since it does not group patients' subgroups which are homogeneous enough.

Poster Session I: Brain Imaging

P0359

Imaging of the serotin-2A receptor in the canine brain: Before a d after pipamperone administration

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Background and Aims: Recent publications have drawn attention to the role of serotonin-2A receptors in mood disorders. Low doses of atypical antipsychotics, like the butyrophenone pipamperone, are suggested as an augmentation strategy in the antidepressant treatment of mood disorders, in addition to conventional antidepressant therapies.

Functional imaging studies with highly specific receptor ligands allow quick assessment of drug-receptor occupancy at different doses of drugs - here pipamperone at 5mg and 10mg doses - in a large animal model.

Methods: Three healthy drug-naïve female Beagle dogs, aged 7 years, were included.

Dogs were scanned before treatment and after administration of one dose of pipamperone of 5mg and 10 mg, 90 minutes prior to injection of the tracer. Acquisition was performed under general anaesthesia 90 minutes after injection of the tracer. The acquisition for both investigations was performed with a triple head gamma camera equipped with LEHR collimators. The images were reconstructed with HOSEM iterative reconstruction and application of a Butterworth-postfilter (cut-off 1,2 cycles/cm, order 8).

Results: The mean binding serotonin-2A binding index before treatment in the frontal cortex was 1.47. In the 5 mg pre-treatment condition, the binding index was reduced to 1.29 and in the 10 mg pre-treatment condition, it was reduced to 1.04. Non-parametric statistics (Friedman related-samples test) yielded a p-value of 0.05.

Conclusion: Even in the very low dose range (5mg-10mg) of pipamperone, there was a significant and dose-dependent reduction in serotonin-2A binding index in the three dogs.

P0360

Visual rating and volumetry of hippocampus on magnetic resonance imaging in Alzheimer disease

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Background and Aims: Early and focal atrophy of medial temporal lobes on magnetic resonance imaging (MRI) in patients with Alzheimer disease (AD) can be measured in several ways.

Methods: In 20 patients with probable Alzheimer disease and 29 cognitively normal elderly medial temporal lobe atrophy (MTA) was measured by volumetry using manual tracing of the hippocampus. The volume of the hippocampus was also rated into five categories expressed as MTA scores ranging from 0 (no atrophy) to 4 (severe atrophy) using a simple and quick semiquantitative method according to the published combined widths or the height of selected three mediotemporal structures.

Results: In comparison to controls, AD patients had significantly smaller volume of either hippocampus (median volume of the hippocampus Hipp dx: 1,81 vs 2,23 p=0,001; Hipp sin: 1,60 vs 2,14 p=0,003; Hipp bilat: 3,40 vs 4,31 p=0,0004). The total MTA score of both sides were significantly higher in AD patients (median 4) than that in controls (median 1) (p=0,0004). Nearly 60 % cognitively normal seniors had the MTA score $\leq 0{,}5$. A similar proportion of patients with AD (65 %) had the MTA score ≥ 2.

Conclusions: Hippocampal loss of tissue can be detected by visual rating and volumetry on MRI in patients with AD. Visual MTA rating is the easier and quicker method than more accurate and time consuming volumetry to support the diagnosis of AD on the brain MR imaging.

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P0361

Delta-9-tetrahydrocannabinol modulates parahippocampal and ventral striatal activity during processing of verbal memory

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Background and Aims: Cannabis is the world's most widely used illicit drug. It can impair verbal learning and induce psychosis, both acutely and possibly following long term use. But, where cannabis acts in the brain to impair verbal learning and induce psychotic symptoms is unclear. The aim of this study was to clarify how one of the main psychoactive ingredients of cannabis, delta-9-tetrahydrocannabinol (THC) acts on the brain to impair verbal learning and induce psychotic symptoms.

Methods: 15 healthy males with minimal exposure to cannabis, were studied on 2 occasions approximately 1 month apart, following oral administration of 10mg of THC or placebo 1 hour prior to scanning, in a double-blind design. MR images were acquired on a 1.5T GE camera while subjects performed a Verbal paired associates task with separate encoding followed by retrieval conditions, with the conditions repeated in the same sequence 4 times. We examined the main effects of drug, task and drug- task interactions.

Results: Administration of THC abolished the normal linear decrement in parahippocampal activation across successive encoding blocks and was associated with a trend for impaired word recall. Administration of THC also altered the normal time-dependent change in ventral striatal activation during retrieval of word pairs which was directly correlated with concurrently induced psychotic symptoms.

Conclusions: These results suggest that impairment in learning and verbal memory associated with cannabis use may be mediated through its action in the medial temporal cortex while psychotic symptoms may be induced through its action in the ventral striatum.

P0362

Distinct language dimensions correlate with superior temporal gyrus and Heschl's gyrus in schizophrenia and healthy controls

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Background and Aims: Language disturbances, such as impoverishment, disorganization and dysregulation, are a prominent feature of schizophrenia. Several neuroimaging studies have suggested the superior temporal gyrus (STG) as a likely anatomical substrate of language deficits in schizophrenia. The aim of this study was to verify a correlation between structural measures of STG and Heschl's gyrus (HG) and language dimensions.

Methods: An extensive language examination battery, which included narrative and conversational expressive tasks, and syntactic and pragmatic comprehension tests, was administered to 23 schizophrenia patients (mean age±SD= 40.30±11.60) and 21 normal controls (mean age±SD= 42.19±11.05). All subjects also underwent a 1.5T MRI session, and STG and HG were manually traced and volumes were obtained, bilaterally, using Brains2.

Results: Specific language deficits were shown in subjects with schizophrenia compared to healthy individuals ($p<0.001$), particularly in verbal fluency, syntactic complexity, lexical diversity and metaphor/idiom comprehension. Interestingly, speech fluency significantly directly associated with left STG gray matter volumes in controls ($r=0.46$, $p=0.03$) but not in patients ($r=-0.27$, $p=0.21$). In contrast, complex syntax and word diversity significantly correlated, respectively, with left and right HG volumes in schizophrenia patients ($r=0.45$, $p=0.02$; $r=-0.47$, $p=0.02$), but not in controls ($p>0.05$).

Conclusions: This study confirmed a widespread impairment of language in schizophrenia. Interestingly, distinct language dimensions differently correlated with STG-HG volumes in patients with schizophrenia and controls, particularly with regard to verbal fluency and syntactic measures.

P0363

Asymmetry of language activation in families with multiple incidence of schizophrenia

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Progress in neuroimaging contributed greatly to the schizophrenia research, including investigation of the etiological factors. We tested the hypothesis that lack of the normal asymmetry of language activation is familial and that it can be found in both schizophrenic and non-schizophrenic family members. In particular, we wanted to know whether relatives who are supposed to be transmitting liability to the illness also demonstrate the loss of asymmetry of language activation. We studied 5 families with at least two members affected with schizophrenia. Functional imaging (fMRI) was used to study cortical activation during a verbal task in Broca's area and its contralateral homologue in subjects with schizophrenia and their both parents who never manifested any psychotic symptoms but one of them had mother or father with schizophrenia. Schizophrenia patients showed lack of asymmetry of language activation. Parents without schizophrenia among their elderly relatives showed normal asymmetry of language activation. Three of parents who supposedly transmit liability to the illness demonstrated the loss of asymmetry of language activation. Our results suggest that lack of the normal asymmetry of language activation could be one of the inherited etiological factors of schizophrenia.

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P0364

Controversies about utility of cerebral spect in schizophrenia research

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The visualization of SPECT images (single photon emission computed tomography) with 99mTc (technetium) — HMPAO (hexamethylpropyleneamine oxime) is a reliable technique to evaluate the different patterns of cerebral regional blood flow.

The available studies show that cerebral SPECT is valid in discriminating individuals with Schizophrenia and healthy controls, having as gold standard a clinical diagnosis of a psychiatrist. In spite of this, the same studies reveal inconsistent changes in cerebral regional blood flow, particularly in frontal and temporal areas, in schizophrenic patients.