

Twin studies constitute a good adequate strategy to evaluate the importance of genetic and environmental effects.

**Method:** RD and APFC were studied in three independent samples of MZ twins discordant and concordant for psychosis. Samples were: i) 24 pairs with one or two affected twins (10 pairs and 14 pairs respectively) and 13 pairs of well control twins held in the Department of Genetics at the Institute of Psychiatry; ii) 19 MZ pairs concordant, 31 pairs discordant drawn from the recent NIMH twin sample; iii) 27 pairs of MZ twins concordant and discordant for psychosis and related disorders (17 and 10 pairs, respectively) and 10 pairs of well control MZ twins from the ongoing Maudsley twin study.

Dermatoglyphic analysis was conducted blind to concordance and diagnostic status in all the cases.

**Results:** The first study reported higher risk of APFC and RD in MZ affected compared to non-affected twins (O.R = 6.8, 95% CI: 2–23.5) (Van Os *et al. Biol. Psychiatry, 1997*). These results have been replicated again in the NIMH twin sample (O.R = 2.4, 95% CI: 0.8–7.1) (Rosa *et al., Am. J. Psychiatry, in press a*) and in the twin sample from the Maudsley Hospital in London (O.R. = 3.25, 95% CI: 1.03–10.31).

**Conclusion:** These results confirm previous work suggesting that non-genetic factors acting early during pregnancy contribute towards the liability to develop psychosis in later.

#### FC12.04

##### MAY P300 HELP DIFFERENTIATE THE SYNDROMATIC PATTERNS IN SCHIZOPHRENIA?

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Abnormalities in P3 amplitude and latency in schizophrenia have been extensively replicated. They seem to reflect some kind of defective information processing, probably relating to problems in attention and/or "working memory". In order to address the problem of the relation between P3 and clinical and cognitive dimensions of the disease we selected 15 medicated, stable, schizophrenic patients (according to DSM-IV) and compare them with 16 healthy volunteers with no previous history of psychiatric disorders in measures of P300 latency and amplitude. Mean age in the patient group (n = 15, 11 m., 4 f.) was 27.7 (±5.08) and 27.6 (±5.6) years for the controls (n = 16, m.). Mean illness duration was 7.43 (±5.2 years) beginning at 20.3 (±3.56) years. The PANSS (Kay *et al., 1987*) was used to assess the psychopathologic profile and the WAIS was performed by all patients. The results from P300 was obtained using the "odd-ball" paradigm. EEG recordings were made using the 10–20 I.S. with 16 electrodes. Statistical analysis was performed using the Mann-Whitney test for the comparison of the independent samples. Spearman's correlation coefficient was used to compare the P300 measures and clinical and cognitive variables. Values of p ≤ .05 were considered statistically significant. As could be expected schizophrenics displayed diminished amplitudes (6.69 μV ± .08 vs. 12.41 μV ± .07) and longer latencies (299 ± 22.6 vs. 197 ± 16.8; p = .02). No significant correlations were found between age of onset, illness duration, the PANSS scores and P300 measures, despite the negative association between P300 amplitude and "affective flattening" (–.518, p = .048) and WAIS results.

**Concl.:** Schiz. had longer latencies and diminished amplitudes when compared to a healthy control group; Patients present low cognitive performance. Absence of correlations between ERPs results and psychopathology and cognitive performance could mean that P300 might represent some sort of neurophysiologic

"endophenotype" present through the schizophrenic spectrum, independent of its syndromatic presentation.

#### FC12.05

##### SMOKING IN SCHIZOPHRENIA: PREVALENCE AND ASSOCIATED FEATURES

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**Background:** The prevalence of cigarette smoking is very high in patients with schizophrenia (SCH), which are quite heterogeneous. The aim of the present study was to determine the prevalence of cigarette smoking and its association to other clinical features in SCH, taking into account the distinction between moderate and heavy smoking.

**Subjects and Method:** A sample of 250 consecutive out-patients with SCH were assessed in their symptomatology (on the PANSS), extrapyramidal signs or symptoms, all current medications, and current use of illegal drugs, alcohol, caffeine, and tobacco. According to their score on the Fagerström Test for Nicotine Dependence (FTND), they were classified as non-smokers (NS), moderate smokers (MS; ≤7 on the FTND), and heavy smokers (HS; >7 on the FTND). The groups were compared by χ<sup>2</sup> tests, Kruskal-Wallis tests, and by logistic regression two by two.

**Results:** The patients' mean (±SD) age was 36.1 (±9.5) years (range, 17–71), and their age at diagnosis 21.9 (±6.0; range, 10–40). Out of the 250, 195 (78%) were males; 77 (30.8%) were NS; 92 (36.8%), MS (median, 20 cigarettes/day); and 81 (32.4%), HS (median, 40). The prevalence rate of smoking was significantly higher in our sample than in the general population of Andalusia, in both males (75% vs. 37%) and females (49% vs. 23%). Caffeine, alcohol, and cannabis consumption were significantly associated to moderate and heavy smoking (linear association). Both the number of psychiatric hospitalizations and the mean daily antipsychotic dose (in chlorpromazine equivalents) were significantly higher in HS than in the two other groups. The PANSS total score was lower in MS than in both NS and HS. These main differences were confirmed by logistic regression.

**Conclusions:** An increased prevalence of smoking is associated to SCH. Among the patients with SCH, HS are an especially deteriorated group.

#### FC12.06

##### ALIEN VOICES: DOES DYSFUNCTIONAL SELF-MONITORING EXPLAIN AUDITORY HALLUCINATIONS IN SCHIZOPHRENIA?

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**Introduction:** Disordered verbal self-monitoring is characteristic of patients with schizophrenia with active auditory hallucinations. We have investigated this dysfunction in an event-related functional magnetic resonance imaging (fMRI) study in which overt verbal self-monitoring is engaged.

**Method:** Subjects read aloud adjectives and heard their voice which were either: (i) undistorted; (ii) distorted (by a pitch change); (iii) replaced by another ("alien") voice or; (iv) by a distorted voice ("distorted alien"). Subjects were male patients with schizophrenia with active hallucinations, patients in remission, and controls. T2\*-weighted images were acquired in 12 non-contiguous axial planes on a 1.5 Tesla GE Signa System, retrofitted with Echo