

PW01-144 - DISCONNECTED REGIONS THAT MAKE PATIENTS PRONE TO PSYCHOSIS

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Introduction: The abnormal connectivity between brain regions has been proposed to account for the physiopathology of psychoses. But which brain regions or which specific links could play the more important role for psychosis to emerge? This study looked at long range functional connectivity in a large sample of schizophrenic patients during resting state.

Methods: Forty-two patients with DSM-IV defined schizophrenia were recruited and compared to 57 controls. Participants took part to a 20 min resting state fMRI scan keeping eyes closed but remaining awake. The signal from the 78 Brodman areas was averaged between which a correlation coefficient was computed as the metric for functional connectivity. Patients and controls were compared using permutation test correcting for multiple testing.

Results: The differences can be better described in terms of hub regions that are more disconnected with others than by specific links. The internal temporal, the temporal pole, the inferior temporal and the anterior cingulate regions were the most disconnected. The sensori-motor frontal and parietal regions were less clearly implicated and were correlated with chlorpromazine equivalent dose. There were no inter-hemispheric difference.

Discussion: The temporal pole was the most differently connected between the two groups. This region is poorly known as there is no equivalent in the other primates. The internal temporal areas (essentially the entorhinal cortex) were also much concerned in accordance with the limbic hypothesis of psychosis. Surprisingly the prefrontal regions were not involved probably because of the absence of an outward directed cognitive task.