

S31-02 - PHYSIOPATHOLOGY OF SEVERE REFRACTORY HALLUCINATIONS IN PATIENTS WITH CORE PARANOID SCHIZOPHRENIA (AFFECTIVE PARAPHRENIA)

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We know from neurological diseases that there is not only one way to hallucinate. This might also be the case in the psychiatric field. During a trial on refractory verbal hallucinations, we rediscovered a subgroup described under several names in France (Délire chronique d'évolution systématique 1882, Psychose Hallucinatoire Chronique 1911-1953), England (Late Paraphrenia, 1954) and Germany (Affective Paraphrenia - AP, 1968). Roughly, AP can be viewed as the core of paranoid schizophrenia.

We compared 10 AP patients with refractory hallucinations to 35 healthy controls with structural and functional MRI (fMRI). We looked for regions that presented with both grey matter deficit relative to controls and with hallucination-related activity. The lateral orbito-frontal cortex (LOF) was bilaterally involved both anatomically and functionally.

Using fMRI, we studied whole brain functional connectivity, both as a trait factor, i.e. hallucinators vs controls, and as a state factor, i.e. ON vs OFF hallucinations in the same patient. As a trait, functional connectivity was significantly increased between left and right LOF in patients relative to controls; however as a state, functional connectivity dropped to zero between left LOF, left and right superior temporal sulcus (STS) when ON relative to OFF hallucination.

In a larger group of AP patients without ongoing hallucinations, the LOF was still disconnected from the cingulate and temporal regions, in comparison not only to controls, but also relative to non AP type schizophrenias, most of whom also hallucinate during episodes.

We will discuss the “LOF-story hypothesis” for AP patients and their hallucinations.