

S-19-002**The neural correlates of natural social-communicative perception processes in patients with schizophrenia: comprehension, recognition and interpretation of verbal and non-verbal information**

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Objective: Gestures are a substantial component of interpersonal communication and have a large impact on speech perception, memory, and social functioning. Patients with schizophrenia, however, show impairments in the perception and production of arm and hand gestures. To shed some light on the neural underpinnings of these dysfunctions we investigated the neural correlates of natural social-communicative processes in patients with schizophrenia using three separate experiments.

Methods: During fMRI data acquisition patients and control subjects performed three tasks regarding the comprehension (evaluation of semantic relation: Does the gesture match the speech content?), recognition (evaluation of content: Is the sentence/gesture rather related to objects or persons?) and interpretation (evaluation of intention: Do you feel addressed?) of verbal and non-verbal information. Videos of an actor speaking sentences and gesturing (5 s duration) were used as stimulus material with the following manipulations: (1) sentence abstractness (concrete/abstract), (2) sentence content (object/person-related), (3) semantic relation of gestures (related/unrelated) and (4) actor orientation (frontal/lateral).

Results: Behaviorally patients demonstrated: (a) a reduced performance in the evaluation of the semantic relation between speech and gesture, especially when presented in an abstract sentence context, (b) a reduced performance in the recognition of object- versus person-related contents and no benefit from additional gesture information, as well as (c) a reduced sensitivity to social cues (actor orientation and gesture) in the addressment evaluation. At the neural level these dysfunctions were related to activity in (a) the left inferior frontal gyrus (IFG) and temporal pole, (b) the left IFG and supramarginal gyrus and (c) activation in bilateral occipito-temporal (for actor orientation) and occipito-parietal (for gesture processing) cortices.

Conclusion: These data indicate that patients with schizophrenia exhibit impairments in the comprehension, recognition and interpretation of verbal and non-verbal information. Reduced activation of fronto-temporal brain networks seems to be the basis of these social-communicative dysfunctions.

Policy of full disclosure: None.

S-19-003**The link between impaired performance of hand gestures and poor nonverbal social perception in schizophrenia and first degree relatives**

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Objective: Hand gestures are important components of nonverbal communication. Schizophrenia patients present with impairments in both gesture perception and production. However, whether both abilities were linked remains unknown. We thus explored the association of gesture perception and production in schizophrenia patients, first degree relatives and healthy subjects.

Methods: In total, 46 patients with schizophrenia, 44 healthy controls and 30 unaffected first degree relatives were studied. We applied the Test of Upper limb apraxia (TULIA), the postural knowledge task (PKT) and the profile of nonverbal sensitivity (PONS) to assess

gesture performance, gesture knowledge and gesture perception respectively.

Results: Patients were impaired in TULIA, PKT and PONS. Using the cut-off scores, 48 % of the patients presented with a deficit in gesture performance following verbal command. In first degree relatives we detected gesture impairments in 33 % of the participants. In patients the performance in TULIA, PKT and PONS was highly correlated. In contrast, neither in controls nor in first degree relatives did we find correlations between tasks.

Conclusion: A substantial number of patients and first degree relatives of patients suffer from impaired gesture production. However, gesture knowledge and perception seem to be impaired in patients exclusively. Deficits in gesture production may qualify as an endophenotype marker for schizophrenia. In patients, nonverbal behavior is generally impaired, both during perception and performance. The findings foster training programs to improve both skills in order to aid communication.

Policy of full disclosure: None.

S-19-004**Formal thought disorder: dissecting its internal structure and neural correlates**

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Objective: Speech and language disorders, such as concretism and formal thought disorder (FTD) are core symptoms of schizophrenia, but do also occur to a similar extent in other diagnoses such as bipolar disorder and major depression.

Methods: We will review clinical rating scales of FTD and introduce a new, validated scale, the TALD. Further, structural and functional brain imaging data will be reviewed and own novel findings presented, relating speech and language dysfunctions to neural networks, within schizophrenia and across the “functional psychoses”. The impact of genetic variance and NMDA receptor blockage on brain function will be addressed with a particular focus on speech and language (dys-)function.

Conclusion: We demonstrate, from the genetic to the brain structural and functional level, that particular aspects of the neural language system are disrupted in patients with FTD across traditional diagnoses.

Policy of full disclosure: None.

S-20 Psychological treatments for posttraumatic stress disorder in psychosis: feasibility, safety and efficacy**S-20-001****Cognitive behavioural therapy for the treatment of posttraumatic stress disorder in schizophrenia**

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Objective: There is a higher rate of Posttraumatic Stress Disorder (PTSD) in people with schizophrenia-spectrum diagnoses compared to the general population (Achim et al. 2011). Whilst there is robust evidence for the efficacy of trauma-focused Cognitive Behavioural Therapy (CBT) for PTSD, clinicians often exclude people with psychosis from exposure interventions (Meyer et al. 2013; NICE 2005). Further, just 10 % of eligible service users access CBT for psychosis,