Challenges of brain imaging in psychiatry: understanding brain structure and function in schizophrenia

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Challenges of Brain Imaging in Psychiatry
Understanding Brain Structure and function in Psychosis
Fabiana da Silva Alves

1. Fractional anisotropy reductions encompassing inferior frontal white matter in 22q11DS with schizophrenia vs. healthy controls are comparable to findings in schizophrenia (this thesis).

2. Decreased white matter volume in posterior brain regions is intrinsic to 22q11DS and independent of schizophrenia. The development of schizophrenia in 22q11DS probably involves disruptions of inferior frontal and temporal white matter fibers (this thesis).

3. People with 22q11DS with schizophrenia have increased concentrations of hippocampal glutamate and myo-inositol. Altered glutamate and myo-inositol may be underlying psychotic symptoms and cognitive impairments in 22q11DS with schizophrenia (this thesis).

4. The middle of the process, what a great place to be.

5. Dopaminergic neurotransmission is involved in monetary reward prediction in healthy individuals. Dopamine depletion induced by AMPT blunted overall brain activation during anticipation of reward and loss (this thesis).

6. Reduced dopaminergic transmission and brain activation after dopamine depletion are indirectly supported by measurements of prolactin and peripheral dopamine markers showing dopamine decrease in the AMPT condition (this thesis).

7. In the placebo vs. AMPT condition brain activity in schizophrenia patients was mainly concentrated in frontal areas and insular cortex during anticipation of reward. This suggests dopamine imbalance and disrupted activity in the cortico-striatal circuitry (this thesis).

8. Following dopamine depletion schizophrenia patients vs. healthy controls had less activation in the ventral striatum, inferior and middle frontal gyrus during anticipation of reward. During anticipation of loss patients had reduced activation in the ventral striatum, frontal and cingulate cortex (this thesis).

9. We are what we repeatedly do. Excellence, then, is not an act but a habit (Will Durant/Aristotle).

10. The art of life lies in the act of living.