



## Treatment of Auditory Verbal Hallucinations (AVHS) with Atypical Antipsychotics in Healthy Individuals with AVHS (Hi-AVHS) – A Pilot Study

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### A Pilot Study

In this pilot study, we investigated the treatment effects and associated global Functional Connectivity Density (gFCD) [1] alterations of atypical antipsychotics on AVHS in Hi-AVHS [2-4] subjects using Functional Connectivity Density Mapping (FCDM) techniques [5]. An MRI database was created that contained the data from 15 Hi-AVHS subjects with chronic or severe AVHS symptoms. The recruited patients were administered the atypical antipsychotic (Risperidone) for 24 weeks and monitored for treatment response. The patients underwent an fMRI pre and post-treatment. There were gFCD alterations in the regions of auditory-memory-language and visual circuits' pre and post-treatment in the Hi-AVHS subjects. The gFCD alterations were different between those patients who responded better to treatment and those who did not respond better to treatment. Atypical antipsychotics can improve AVHS in Hi-AVHS subjects to a certain extent, and the treatment effects were found to be associated with gFCD alterations in the auditory-memory-language circuit. This is the first report describing the effect of treatment-induced auditory-memory-language circuit gFCD alterations in Hi-AVHS subjects who were treated with atypical antipsychotics. Although with many limitations, these findings may provide a clue for further study which focuses on exploring the treatment target or strategies for Hi-AVHS subjects.

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