
AN OPEN-LABEL TRIAL OF ADJUNCTIVE TOCILIZUMAB IN SCHIZOPHRENIA

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Schizophrenia is associated with impaired cognition, which persists despite current treatments, and is an important determinant of quality of life and overall function. Converging lines of evidence suggest that interleukin-6 (IL-6) may play a role in the pathophysiology of schizophrenia. We previously found that higher blood IL-6 levels were a significant predictor of greater cognitive impairment in schizophrenia after controlling for multiple potential confounding factors. We are conducting an 8-week open-label trial of adjunctive tocilizumab in schizophrenia. Tocilizumab is a humanized monoclonal antibody against the IL-6 receptor, approved by the US FDA for the treatment of adults with moderately to severely active rheumatoid arthritis. Tocilizumab is administered as an intravenous infusion every 4 weeks. Subjects in the trial are age 18-55, taking a non-clozapine antipsychotic, stable based on clinical judgment and no psychiatric hospitalizations in the past 3 months, and on the same psychotropic medications for at least 1 month. Following a screening visit, subjects receive a 4 mg/kg infusion of tocilizumab at baseline and again at 4 weeks. Cognition, as measured by the Brief Assessment of Cognition in Schizophrenia (BACS, using alternate forms) is assessed at baseline, and 2, 4, and 8 weeks. In the first 3 subjects, tocilizumab infusions were well tolerated without significant adverse effects. The mean improvement was 16% on the BACS composite score, including a significant mean 35% improvement (12 points) on digit symbol coding ($p=0.03$). These preliminary data suggest that anti-cytokine therapy may be a viable adjunctive treatment for cognitive impairment in schizophrenia.