A prospective comparative study of risperidone long-acting injectable for treatment-resistant schizophrenia with dopamine supersensitivity psychosis

OBJECTIVE: Dopamine supersensitivity psychosis (DSP) is considered to be a cause of treatment-resistant schizophrenia (TRS). DSP may be closely related to the up-regulation of dopamine D2 receptor (DRD2) density in the brain, which is induced by chronic treatment, particularly for high-dose antipsychotics with relatively short half-lives. Some patients may have an increased need for higher doses of antipsychotics for control of their psychosis. We hypothesized that an atypical long-acting agent could be clinically efficacious in patients with DSP, and we investigated the efficacy of risperidone long-acting injections (RLAI) with narrower blood kinetics than oral antipsychotics in patients with TRS and DSP.

METHOD: This is a multicenter, prospective, 12-month followup, observational study that included unstable and severe TRS patients with/without DSP: 115 patients with TRS were recruited and divided into two groups according to the presence/absence of DSP, which was judged on the basis of the patients’ clinical courses and neurological examinations. RLAI was administered adjunctively once every 2 weeks along with oral antipsychotics. We observed changes in scores for the Brief Psychiatric Rating Scales (BPRS), Clinical Global Impression–Severity of Illness (CGI–S), Global Assessment of Functioning Scale (GAF), and Extrapyramidal Symptom Rating Scale (ESRS) during the study. Of the 94 assessed patients, 61 and 33 were categorized into the DSP and NonDSP groups, respectively.

RESULTS: The two group’s baseline BPRS total scores, CGI–S scores and GAF scores did not differ, but the ESRS scores were significantly higher in the DSP group compared with the NonDSP group. Treatment significantly reduced the BPRS total scores and CGI–S scores, and increased the GAF scores in both groups, but the magnitudes of change were significantly greater in the DSP group relative to the NonDSP group. ESRS scores were also reduced in the DSP group. The Responder rates (more than 20% reduction in BPRS total score) were 62.3% in the DSP group and 21.2% in the NonDSP group.

CONCLUSIONS: Our findings suggest that DSP contributes to the etiology of TRS. Atypical antipsychotic drugs in long-acting forms, such as RLAI, can provide beneficial effects for patients with DSP.