

Abstract

Background: Schizophrenia is known to associate with deficits in facial emotion perception (FEP). Moreover FEP deficit has been suggested to contribute to aggression. However there is a paucity of evidence for FEP impairment in schizophrenia patients comorbid with ASPD, a severe form of schizophrenia patients with higher violence propensity. This study aimed to examine if schizophrenia patients with ASPD are more impaired in FEP than patients with schizophrenia and healthy individuals. The relationships between FEP and clinical variables, neurocognitive functions and aggressive behaviour, in this subgroup of schizophrenia patients with ASPD were also examined.

Methods: Three groups each consisting of 30 individuals, including subjects with DSM-IV diagnosis of schizophrenia comorbid with ASPD, schizophrenia patients, and healthy controls were recruited. All participants completed FEP tasks for six universal emotion types, using a locally validated paradigm within which photographs from the Japanese and Caucasian Facial Expressions of Emotion set were used. A comprehensive battery of neurocognitive assessments and a scale measuring aggression history were administered. Multivariate and univariate analyses of variance, and correlational analyses were performed.

Results: Schizophrenia patients with ASPD had the most severe FEP impairment, in particular in identifying emotions with negative valence; whereas patients with schizophrenia had worse FEP performance than the healthy controls. Schizophrenia patients with ASPD were also found to have more severe impairments in other neurocognitive functions. In addition, history of aggression had a significant negative correlation of moderate strength with identification of negative facial emotions in schizophrenia patients with ASPD.

Conclusion: While impairment of FEP was found in schizophrenia patients, the deficit was more severe in schizophrenia patients comorbid with ASPD. Patients with comorbidity of schizophrenia and ASPD had a much more severe aggression history than patients with either condition alone. Given our findings of significant correlation between history of aggression and FEP impairment, clinicians should be aware of the possibility of FEP impairment contributing to aggression in this group of patients. Our findings lend support to the need of social cognitive training targeted to FEP deficit in this particular subgroup of patients.

Keywords: Schizophrenia; Antisocial personality disorder; Facial emotion perception; Aggression