Effectiveness of atomoxetine and methylphenidate for problematic online gaming in adolescents with attention deficit hyperactivity disorder

Jeong Ha Park, Young Sik Lee, Ji Hyun Sohn and Doug Hyun Han

DOI : 10.1002/hup.2559

Abstract

Objective
There is a high prevalence of problematic online gaming in adolescents with attention deficit hyperactivity disorder (ADHD). In the current study, we compared the effectiveness of atomoxetine (ATM) and methylphenidate (MPH) on problematic online gaming in adolescents with ADHD.

Methods
We recruited 86 adolescents diagnosed with ADHD together with Internet gaming disorder. These participants were divided into two treatment groups: 44 participants were treated with MPH for 12 weeks, and 42 participants were treated with ATM for 12 weeks.

Results
During the 3-month study period, the MPH group showed greater improvement in Korean ADHD rating scale scores than the ATM group. The ATM group showed greater improvement in Child Depression Inventory scores than the MPH group. However, Young Internet Addiction Scale and Behavioral Inhibition & Activation Scales score changes did not differ significantly between the MPH and ATM groups. In both groups, changes in Young Internet Addiction Scale scores were positively correlated with the changes in Behavioral Inhibition & Activation Scales scores.

Conclusions
Both MPH and ATM reduced the severity of Internet gaming disorder symptoms, and this reduction was correlated with impulsivity reduction, which also resulted from both ADHD medications. These findings suggest impulsivity plays a critical role in the development of problematic online gaming.