To the Editor;

Hyperactivity and ADHD in traffic accidents,

Attention deficit hyperactivity disorder (ADHD) is one of the most common childhood brain disorders and can continue through adolescence and adulthood. Symptoms include difficulty staying focused and paying attention, difficulty controlling behavior, and hyperactivity [1]. In epidemiological studies, it has been shown that ADHD patients drive more riskily, lose their lives as a result of traffic accidents, and get traffic fines much more of than the normal population [2,3]. In this study, we aimed to determine the ratio of ADHD traffic accident patients and to compare their sociodemographic properties with non-ADHD patients who were admitted to our emergency service. In the literature, no research has been reported about ADHD in drivers presented with traffic accidents taken to emergency services. We also aimed to evaluate the relationship between accidents and ADHD, which is a preventable cause of traffic accidents. In this study, after the ethics committee's approval, we included 162 patients older than 18 years who were admitted to our emergency service between December 2011 and April 2012. Eighty-one patients were the drivers of the cars that were exposed to traffic accidents, and 81 patients were nontraumatic patients. After the initial stabilization of the patients, consent to participate was gained in the emergency service from conscious patients. Consent of hospitalized patients was taken at the time of discharge. Patients who became exitus in the emergency department (ED) or during follow-up were excluded from the study. Age, sex, alcohol usage, the Glasgow coma scale, number of accidents up to date, smoking status, education level, and marital status of each patient were noted. Both groups were given questionnaires with the ADHD rating scale. Answer scores and symptom scores of the groups were noted. Patients with attention deficit disorder who met the minimum 6 of 9 Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria were diagnosed. Patients who met the minimum 6 of 9 DSM-V criteria were prediagnosed with hyperactivity and impulsivity. The exclusion criteria of our study were brain trauma resulting in decreased consciousness, nondriver/rider victims of motor vehicle accidents, and psychiatric comorbidity. Statistical data were analyzed with the SPSS (statistical package of social sciences) 18.0 programme. T test and Pearson χ² tests were used for independent groups. The significance level was P N .05. In our study, 150 males (92.6%) and 12 females (7.4%), a total of 162 traffic patients, were admitted to our ED. In the traffic accident group (TAG), the mean age was 34.04 ± 1.38, and in the control group, mean age was 37.12 ± 1.72. Ninety-one patients (56.2%) were primary school graduates, 41 patients (25.3%) were high school graduates, and 30 patients (18.5%) were university degree holders. Eighty-nine patients (56.2%) were married, 70 patients (43.2%) were single, and 3 (1.9%) patients were divorced. Eighty-one (50%) patients were smokers. Seventy-six (93.8%) patients' admission time alcohol degrees were under 10 promille, and those of 5 (6.2%) patients were higher than 10 promille. Considering the accident counts of the patients, it was the first accident for 52 patients (64.2%), the second for 24 (29.6%) patients, the third for 3 (3.8%) patients, the fourth for 1 (1.2%) patient, and the fifth for 1 (1.2%) patient. Four patients were diagnosed with attention deficit syndrome. Four (100%) patients who were diagnosed with attention deficit disorder had alcohol degrees under 10 promilles. Fourteen patients were diagnosed with hyperactivity. Nine (63.3%) patients’ alcohol degree was under 10 promilles, and 1 (7.1%) patient's alcohol degree was higher than
10 promille of those diagnosed with hyperactivity. Four (28.6%) of 14 patients' alcohol degrees were dismissed. There was a significant difference between groups for attention deficit symptom counts ($t = 2.030, P = 0.044$). The mean number of attention deficit symptoms in TAG was $1.3086 \pm 1.75$, this ratio was $0.8148 \pm 1.31$ in the nontraumatic group (NTAG). There was no significant difference between groups for hyperactivity symptom count ($P = .55$). In the TAG, the hyperactivity symptom count was not related with alcohol level ($P = .345$). Similarly, the attention deficit symptom count was not related with alcohol level ($P = .325$). Forty-two patients in the TAG and 39 patients in the NTAG were smokers. The difference between groups was not significantly different ($P= .637$). Forty-five patients in the TAG and 44 patients in the NTAG were married, but the difference between groups was not significant ($P=.818$). In the TAG, 49 patients were primary school graduates, 14 patients were high school graduates, and 18 patients held a university degree. These results for the NTAG were 42, 27, and 12 respectively. We could not find a significant difference between groups for education level ($P= .053$). The number of hyperactivity symptoms and the amount of accidents up to date were significantly related ($F = 4.056; SD = 1; P = .047$). The number of attention deficit symptoms was not related with amount of accident up to date ($F = 2.594; SD = 1; P = .111$). By determining the drivers who often have traffic accidents and difficulties in maintaining their attention and removing this highly preventable cause, the loss of life and property, costs on society, and burdens on the emergency services caused by traffic accidents may be reduced. Further comprehensive studies about ADHD patients' emergency service admissions and preventative methods are needed.