

Analysis of characteristics of drug intoxication patients in Seoul metropolitan area

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**Background:** The study was aimed to investigate the current status and characteristics of drug intoxication patients who visited the emergency department of a university hospital located in Seoul, and to establish the basic data to help set focuses and policy of the treatment. **Methods:** From March 1, 2002 to June 30, 2016, we retrospectively reviewed medical records of patients who were admitted through the Emergency department of Seoul Paik Hospital, Inje University. **Results:** A total of 195 data was collected. The proportions of younger age group below 40, middle age group between 40 and 65, and elder group over 65 years old were 47.6%, 37.9%, and 14.3%, respectively. The proportion of women was 61.1%, highly educated patients was 42.5%. 60.4% of the patients had been having a psychologic medical history and being treated by psychologists. The characteristics of causative drug of drug intoxication was as follows. Most frequently ingested drugs were prescribed medication (77.4%). The distribution of ingested drugs was psychiatric drugs (68.1%), analgesics (15.9%), other drugs (30.9), pesticide (0.9%), sequentially. There was no difference in incidence of intoxication between night and day. However, intoxication incidence was higher during the winter season. Suicide was the most common cause of intoxication (67.1%), and among them, 7.6% of the patients had previously attempted suicide. There were no differences in habits such as residence type, occupation, smoking, and drinking. Of patients, 51.2% came to the hospital drowsy / semi-coma state initially, 65.6% of the patients were admitted to ICU, and average of hospital duration was 6.01 day without death. **Conclusion:** It is necessary to identify the risk factors of drug intoxication patients, and to provide systematic education with mental support for them. Nationally, we emphasize the importance of constructing drug poisoning guidelines and poison control centers.

Urinary N-Acetyl-β-D-Glucosaminidase and Diabetic Cardiovascular Autonomic Neuropathy

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**Background:** Diabetic cardiovascular autonomic neuropathy (CAN) increases cardiovascular morbidity and mortality. Previous studies have found that diabetic CAN is related to microalbuminuria. We aimed to investigate the association between diabetic CAN and urinary N-acetyl-β-D-glucosaminidase (uNAG), a renal tubular injury marker, which is suggested as an early marker of diabetic nephropathy. **Methods:** Cross-sectional data of 464 patients with type 1 diabetes (T1D) (n=73) and type 2 diabetes (T2D) (n=391) were analyzed who had tests for uNAG and autonomic function test from February to November 2016. The presence and severity of CAN were assessed by age-dependent reference values of the five autonomic function tests. **Results:** In patients with T1D, uNAG was significantly associated with the presence of CAN in multivariate analysis (odds ratio 1.61, 95% confidence interval 1.10-2.37;  $p=0.015$ ) after adjusting covariates. In patients with T2D, uNAG was not significantly associated with the presence of CAN. The severity of CAN was significantly associated with uNAG in multivariate analysis in patients with T1D (standardized  $\beta$  coefficient 0.40,  $p=0.002$ ), and in patients with T2D (standardized  $\beta$  coefficient 0.11,  $p=0.031$ ). In receiver operating characteristic (ROC) analysis, the optimal cut-off of uNAG for predicting CAN was 8.88U/g Cr in patients with T1D. In T1D without albuminuria, the prevalence of CAN was significantly higher in high uNAG group than low uNAG group ( $p=0.002$ ). **Conclusion:** Elevated urinary N-acetyl-β-D-glucosaminidase (NAG) is associated with CAN in patients with T1D, especially in patients without albuminuria. Urinary NAG is associated with the severity of CAN in both T1D and T2D.