

**Conclusion:** This is a first report associating DNA methylation signature with abstinence in alcoholics treated with acamprosate. Future studies are needed to investigate the value of this association as a potential biomarker of acamprosate response in treatment-seeking alcoholics.

### PM322

#### The risk factors of low bone mineral density in male alcoholic patients: cross-sectional study

Tadasu Horai, Shunken Boku, Noriomi Eguchi, Akitoyo Hishimoto, Atsushi Kimura, Kentaro Mori, Naofumi Shinmyo, Ichiro Sora  
Kobe University, Japan

#### Abstract

**Background:** Osteoporosis is often observed in alcoholic patients who are reported to have low bone mineral density (BMD). Generally, heavy drinking is toxic to bone, whereas low and moderate drinking are observed to involve in high BMD. It is not still clear whether other drinking habits (period, abstinence period, loss of control consumption, etc.) are involved in the risk factor of low BMD and whether new bone turnover marker (undercarboxylated osteocalcin) is clinically useful to predict the low BMD in alcoholic patients. Here, we tried to explore the risk factor for low BMD in male alcoholic patients.

**Methods:** We recruited 386 male alcoholic patients with complete information about drinking habit, physical complications and smoking history. All participants were measured BMD by the ultrasound method with serum levels of liver enzymes and bone turnover markers.

**Result:** The participants were divided in two groups according to their T-score of -1 standard deviation (SD). Individuals with the T-score of -1 SD and above are defined a normal BMD group. Individuals with the T-score of -1 SD and below are defined a low BMD group. The normal BMD group consists of 204 males and the low BMD group consists of 182 males. The multivariate logistic regression analysis found that both BMI and abstinence period are negatively correlated with low BMD. The odds ratios are 0.88 (95% CI: 0.798–0.966) and 0.41 (0.225–0.729), respectively. By contrast, both smoking and undercarboxylated osteocalcin are positively correlated with the low BMD. The odds ratio is 3.31 (1.617–7.065) and 1.11 (1.020–1.218) respectively.

**Conclusion:** In alcoholic patients, smoking and high undercarboxylated osteocalcin associated with lower BMD. We may need to encourage alcoholic patients to quit smoking to prevent reduction of BMD and measure undercarboxylated osteocalcin to predict lower BMD.

### PM323

#### Cognitive function improvement in alcoholic dementia after 12 week memantine treatment

Yeonjin Kim<sup>1</sup>, MD, Younghoon Chon<sup>2</sup>, MD, Daijin Kim<sup>3</sup>, MD, PhD.

<sup>1</sup> Department of Psychiatry, SNG-SNU Boramae Hospital, Seoul, Korea

<sup>2</sup> Department of Psychiatry, Incheon Chamsarang Hospital, Incheon,

Korea] <sup>3</sup> Department of Psychiatry, Catholic University of Korea,

Holy Family Hospital Correspondence to: Daijin Kim, Department of

Psychiatry, Catholic University of Korea, Seoul ST. Mary's Hospital,

222 Banpo-daero, Seocho-gu, Seoul, Korea Tel: +82-2-2258-5745

E-mail: kdj922@chollian.net

#### Abstract

**Background:** There is a compelling evidence that alcohol induced neurotoxicity were related to glutamate excitotoxicity. It is hypothesized that the low affinity NMDA receptor antagonist,

memantine would improve cognitive function of patient with alcoholic dementia. The aim of this study was to testify this hypothesis and to evaluate its effect of cognitive improvement of patient with alcoholic dementia.

**Method:** The study is planned as a 12-week, open-label study of 20mg memantine, a NMDA antagonist, as treatment for cognitive and neurobiological problem in patients with alcoholic dementia. CERAD-K and K-MMSE was administered to total 27 male patients diagnosed as alcoholic dementia according to the DSM-IV criteria before and after 12-week memantine medication.

**Results:** Word list recall, word list recognition, time orientation, drawing a interlocking pentagon, and K-MMSE total score of the patients were improved significantly after the memantine trial.

**Conclusions:** Memantine has significant effects on the cognitive function improvement of the patients with alcoholic dementia. Limitation and future direction of this study were discussed.

### PM324

#### Case study on alcohol withdrawal with transient periodic synchronous discharge

Kenji Komo<sup>1</sup>, Shigeru Toki<sup>1</sup>, Chiyo Shibasaki<sup>1</sup>, Hidehisa Yamashita<sup>2</sup>, Takahiro Oyamada<sup>1</sup>, Shigeto Yamawaki<sup>2</sup>

<sup>1</sup> Mihara Hospital <sup>2</sup> Hiroshima University Hospital

#### Abstract

There are few reported case studies on alcohol withdrawal syndrome with periodic synchronous discharge ( PSD ). We report the case study of a middle-aged man diagnosed with alcohol withdrawal syndrome and transient PSD. The patient was an alcoholic who had been repeatedly hospitalized. During treatment on an outpatient basis, the patient suffered a convulsive attack and delirium related to alcohol withdrawal after drinking, and was hospitalized. His withdrawal symptoms improved after hospitalization. When he completed the alcoholism treatment program, a trial stay overnight at home was attempted. During the stay, the patient drank again. After returning to the hospital, he again suffered from alcohol withdrawal related delirium, indicated disturbance of consciousness and inconsistent behaviors. Electroencephalography was conducted, which indicated PSD. However, a head MRI did not show any abnormal findings. Since the disturbance of his consciousness was prolonged, valproic acid 1200mg was administered, which improved his disturbances in consciousness and the abnormal electroencephalogram. It is suggested that chronic exposure to alcohol might make the brain vulnerable and develop a kindling phenomenon, or a preparatory state for convulsions. It is also suggested that abnormal electroencephalograms might reflect the severity of alcohol dependence.

### PM325

#### Relationship Between Maternal Alcohol Exposure During Pregnancy and ADHD in Their Elementary and Middle School Aged Offspring

Jang Wook Lee, Pusan National University Yangsan Hospital, Republic of Korea

#### Abstract

**Objectives:** This study was designed to evaluate the relationship between maternal alcohol exposure and ADHD in their elementary and middle school aged offspring in Pusan, Korea.

**Methods:** Students from two elementary schools and one middle school in Pusan were selected. Questionnaires were distributed