

## Poster Abstracts

### PO-76

#### **HYPOTENSION AND MODERATE HYPOTHERMIA CAUSED BY BENZODIAZAPINE**

Han-Wei Mu

*Emergency Department, China Medical University Hospital, Taichung, Taiwan*

**Introduction:** The severe manifestations of benzodiazapines (BZDs) poisoning are central nervous system and respiratory system depression. Most clinical studies report serious hypothermia complicating by BZDs appear to occur in the context of intentional or inadvertent overdose. Herein we report a case of profound hypothermia associated with use of clonazapem and alprazolam for the treatment of insomnia and anxiety in therapeutic doses.

**Case Report:** This 56 year-old male with a history of end-stage renal disease and cerebral vascular disease was brought to the emergency department after being found unresponsive. Information obtained from his family indicated the patient was well until several days prior to presentation when he started to consume clonazapem and alprazolam. On presentation, vital signs were notable for moderate hypothermia (30°C) and systolic blood pressure around 70-80 mmHg. An electrocardiogram revealed an Osborn wave (Figure). The patient was unresponsive to the treatment of rewarming measures, such heating lamp and heating blankets. We tried flumazenil and he was returned dramatically to a normal state of body temperature, blood pressure and consciousness.

**Discussion:** Thermoregulation is the complex physiologic process. Lots of studies suggest the participation of GABA in the processes of thermoregulation. Clonazapem and alprazolam act by binding to the benzodiazepine site of the GABA receptors. Hypothermia induced by BZDs suggest involvement of GABA. Flumazenil, a benzodiazepine receptor blocker, completely block the action of BZDs on body temperature.