CASE REPORT

AGGRESSION FOLLOWING BENZODIAZEPINE INGESTION IN A FORENSIC PSYCHIATRIC PATIENT: A CASE REPORT

Ahmad Nabil Md Rosli*, Suarn Singh**

***Department of Psychiatry, Universiti Kebangsaan Malaysia Medical Centre (UKMMC), 56000 Cheras, Kuala Lumpur, Malaysia; **Hospital Bahagia Ulu Kinta Jalan Besar, 31200 Tanjong Rambutan, Perak, Malaysia.**

Abstract

Objective*: The incidence of benzodiazepine paradoxical reaction is uncommon. It may be implicated with crime as will be described in this case report. *Method*: We report a 37 year-old schizophrenia patient who was detained by the authority under Section 392/397 of Penal Code assaulting a lady using sharp weapon. He had history of illicit substance abuse and benzodiazepine dependence with significant history of aggression associated with benzodiazepine. Just prior to the incident, he took a significant amount of various types of benzodiazepine and suffered from amnesia of that event. During the time of the offense, he was in remission as far as schizophrenia is concerned. *Result*: He was under the forensic psychiatric care and observation at Hospital Bahagia Ulu Kinta (HBUK). He developed withdrawal symptoms of benzodiazepine in the ward. *Conclusion*: He was found by the expert team to be under the influence of benzodiazepine during the offence. The role of benzodiazepine and relevant factors leading to aggression will be discussed in this manuscript. *ASEAN Journal of Psychiatry, Vol. 16 (2): July – December 2015: XX XX.

Keywords: Crime, Forensic, Benzodiazepine Paradoxical Reaction

Introduction

Over the past few decades, benzodiazepine has been prescribed to treat various conditions resulting from mental illness. It is a well-known drug which has anxiolytic, sedative and anticonvulsive effect. However small numbers of people who take benzodiazepine have a risk of developing opposing inhibitory effect of benzodiazepine i.e. aggression, which may be implicated with crime.[1] In this case report, we will describe a typical case of benzodiazepine paradoxical reaction exhibited in one of our patient who was admitted to Hospital Bahagia Ulu Kinta, Perak (HBUK).

Case Report

Mr A is 37 year-old single gentleman was detained by the authority and was charged under section 392/397 Penal Code for theft using sharp weapon to a victim in 2014. This was the first occasion where he was detained by the authority and admitted to HBUK under section 342 of the Criminal Procedure Code for observation and evaluation. Mr A who suffered from schizophrenia since 12 years ago had presented with disruptive behaviour, aggression and auditory hallucination during the very first episode of his psychotic illness. He was treated with risperidone 4 mg daily but was not compliant to medication. Since then, he had multiple relapses requiring admissions to psychiatric ward in various hospitals in Kuala Lumpur. Having poor insight about the illness which led to non-compliance was the cause for each relapse. Intramuscular flupentixol decanoate was then introduced.

Apart from the psychotic episode he had, there were a few occasions where he was alleged of attempting suicide by overdosing himself with medications, but failed. There was no history of proper planning to perform the alleged suicide and it was rather due to his impulsivity.

Furthermore, he admitted to have been abusing illicit substance since the age of 20. Among the substances that he abused were heroin, amphetamine, and cannabis. Likewise he bought sleeping pills from the pharmacy such as alprazolam, lorazepam and clonazepam and abused them. He exhibited tolerance to these pills after so many years taking them. He would develop headache, irritable, insomnia and at times unable to focus if he did not take it for 1-2 days. Upon occasion, he was reported to be aggressive to his family members after he took the pills in a large number. Despite this, he continued to abuse benzodiazepine. He denied abusing alcohol.

Apart from schizophrenia and substance issue, he had been gambling since 10 years ago, in which he had borrowed some amount of money in order to pay the debts resulted from gambling. He had to sell his car in return for money. According to his mom, patient had borrowed money from the illegal creditor and he spent the money for gambling. Around the time of incident, the creditor was said to be searching for him. He felt so distressed and he started to carry with him a knife for self-protection. Before he went out of the house he took a large amount of benzodiazepines of various kinds i.e. alprazolam and clonazepam, as he started to feel distress and restless. All of a sudden, he found himself at the hospital and multiple laceration wounds on his body. He was told by the police officer that he was found to be agitated and aggressive towards a lady. He was suspected of robbing her and had caused some injuries to the victim as well. However, he could not recall the incident at all. He denied any psychotic or depressive symptoms before and around the time of incident. He was then detained under police custody before he was sent to HBUK for observation under Section 342 of Criminal Procedure Code. During admission, physical examination revealed he was alert and conscious, there were multiple stiches found on the forehead; chin and right hand resulted from recent laceration wounds.

Mental state examination during admission showed a young gentleman, cooperative, no hallucinatory behaviour and no psychomotor retardation or agitation. His speech was relevant and coherent. He was euthymic and his affect was congruent to thought. There was no perceptual disturbance, thought content or thought form disorder noted. Cognitively he was orientated to time, person and place. His attention, memory, judgement, abstract thinking, knowledge was intact. His insight was poor. Examination of cardiovascular, respiratory, gastrointestinal and central nervous system was unremarkable. There was no injection marks seen. Investigation revealed normal full blood count, renal and liver profile. The urine for toxicology result was negative for tetrahydrocannabinoids, morphine, amphetamine and methamphetamine. CT scan of brain showed no evidence of intracranial bleed or infection (Figure 1).

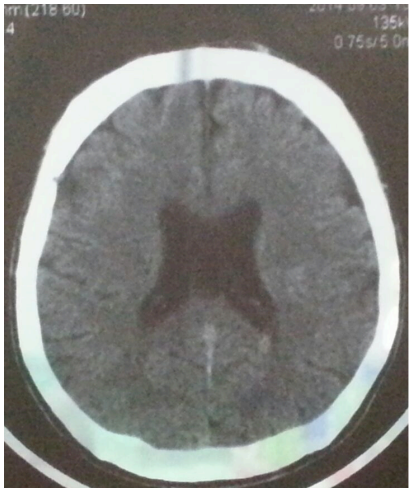

Figure 1. **Non-enhanced CT Brain of Mr. A showing no evidence of brain infection or intracranial bleed**

During the first a few days in the ward, he was slightly irritable during interview. He exhibited a few withdrawal symptoms of benzodiazepine like headache and myalgia. His behaviour was observed closely for a few weeks. A psychosocial investigation was done and information that was sought from his previous psychiatric record from other hospital revealed that he used to have similar behaviour secondary to benzodiazepine paradoxical reaction. A diagnosis of schizophrenia in remission with co-morbid benzodiazepine dependence was made. It was concluded that during the time of offense he was under the influence of benzodiazepine. He was found fit to stand for trial.

Discussion

The incidence of paradoxical reaction to benzodiazepine is reported to be as low as 1% [1]. It is characterised with hyperactivity, excitement, sexual disinhibition, hostility and rage [2]. One study showed that 27% of 1884 police detainees attributed their offenses to benzodiazepine [3], while in other study 13% involved in fight and 20% in unprovoked aggression attributed to benzodiazepine [4]. A recently published systematic analysis reviewing the association between benzodiazepine and aggression confirmed a moderate association between the two [5].

While the mechanism behind remains unclear, there exist multiple theories to explain the phenomenon. It is postulated that variability of genetically determined GABA receptor resulting in alteration of response to benzodiazepine, plus the presence of any psychiatric or personality disorder which previously manifested as anger and aggressive behaviour may lead to paradoxical reaction [6] Its amnestic and anxiolytic effect may lead to a loss of control that governs normal social behaviour [2]. Patients of young and old age, alcoholism [6], or with neurological condition, impulse control problem and learning disabilities are at risk to develop such a presentation [7,8]. In this case, a combination of factors including history of previous agressions with possibly impulsive bahavior as suggested by persistent gambling-related and alleged suicidal behaviour must be taken into consideration.

Whether one benzodiazepine poses different risk than another is not clear. In a retrospective study assessing the emergence of benzodiazepine paradoxical reaction among three groups of patients treated with different benzodiazepine such as alprazolam or clonazepam, it was found out that there was no significant difference between the two groups [9]. A risk of developing paradoxical reaction to a particular benzodiazepine of different dosage should be cautiously made due to the potential confound of the study sample. An approximate diazepam dose of 5-10 mg is reported to be able to cause paradoxical reaction as a once-off and 40-80mg in chronic usage [5].

As demonstrated in this case, paradoxical reaction will be diminished by discontinuation of the offending drug. Alternatively antipsychotic like haloperidol or flumazenil can be used in an agitated patient or severe case paradoxical reaction to benzodiazepine [2,7].

Conclusion

Benzodiazepine paradoxical reaction is uncommon. It may be implicated with crimes especially among those who have personality or psychiatric disorder with a history of aggression and impulsivity before.

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Corresponding author: ***Ahmad Nabil Md Rosli, Trainee Psychiatrist, Department of Psychiatry, Universiti Kebangsaan Malaysia Medical Centre (UKMMC), 56000 Cheras, Kuala Lumpur, Malaysia.***

Email: ahmadnabilrosli@gmail.com

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