Poster Abstracts

PO-25

B5: A CENTRAL ANTIMUSCARINIC RECEPTOR USED FOR RECREATIONAL ABUSE IN THAI ADOLESCENT

W Kriengsoontornkij[1,3], P Tummarintra [3], T Jiranantakan [2,3]

[1] Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol Universtiy, Thailand, [2] Department of Preventive and Social Medicine, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand, [3] Siriraj Poison Control Center, Siriraj Hospital, Thailand

Objectives: To report a case of "B5" overdose for recreational purpose presenting with symptom of centrally acting antimuscarinic receptor and to report the confirmed evidence that "B5" contained trihexyphenidyl.

Case: A 14-year-old boy was brought to emergency department (ED) due to auditory and visual hallucination with mild agitation. The physical examination revealed heart rate as 72/min, respiratory rate 20/min, and blood pressure 114/50mmHg. Pupils were 4 mm and reactive to light at both eyes. Neurological examination and muscle tone were normal. There was no diaphoresis or dry skin. At ED, 10 mg of diazepam was administered intravenously to control his agitation. He fell asleep after diazepam injection and was transferred to the pediatric ward for observation. Initial blood chemistry revealed normal blood glucose, electrolytes and kidney function. Urine was negative for amphetamines, cannabinoid and opiate. We found a white tablet with the imprint of "B5" in his pocket and it was confirmed by Gas Chromatography/Mass Spectrometry (GC/MS) analysis that the tablet contained trihexyphenidyl.
The patient's auditory and visual hallucination was gradually improved within one day. He admitted that he and his friends drank cocktail containing 5 tablets of "B5" mixed with iced tea for recreational purpose approximately 18 hours before arrival. He also smoked cigarettes and used cannabis as well as tramadol periodically.

Discussion: Trihexyphenidyl is an antagonist of acetylcholine and other cholinergic stimuli at muscarinic receptors in the central nervous system (CNS) and, to a lesser extent, in smooth muscle. It has weak mydriatic, antisecretory, and positive chonotropic activities. In small dose, trihexyphenidyl has CNS-depressant effects, but in larger doses, it causes CNS-stimulatory effects.
Our patient presented with agitation as well as auditory and visual hallucination without significant peripheral anticholinergic effects such as tachycardia, mydriasis, flushing and urinary retention. Therefore, these presentations do support the mechanism of action of trihexyphenidyl.
Trihexyphenidyl has been prescribed mainly by psychiatrist and neurologist for treatment of parkinsonian disorder, drug-induced extrapyramidal syndrome and acute dystonia from antidopaminergic drugs. In Thailand, trihexyphenidyl has been available in drug stores without prescription required; therefore adolescents are able to access this drug for recreational purpose easily. They always name trihexyphenidyl as "B5" because of the imprint on the tablet.

Conclusion: "B5" which has been widely abused for recreational purpose among Thai adolescents was proven to be trihexyphenidyl. The clinical presentations of trihexyphenidyl in this report were mainly the effects of CNS antimuscarinic receptor.