

## **PP12 A TOXIC PANACEA FOR HEROIN: ETHYL CHLORIDE TOXICITY**

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### **INTRODUCTION**

Malaysia has undergone Movement Control Order (MCO) since March 2020 due to Coronavirus disease (COVID-19) pandemic. The MCO had restricted movements of people including illegal businesses. This case report discusses a heroin abuser who suffered from ethyl chloride spray toxicity, due to inaccessibility of heroin following the MCO.

### **CASE DESCRIPTION**

Mr. K, a young gentleman presented to emergency department with reduced consciousness. He had multiple episodes of seizure one week prior, associated with abnormal gait, uncontrolled movement and restlessness. He was an active heroin user, getting his supplies illegally but the MCO had restricted movement effectively and stopped the supplies.

Instead, he took ethyl chloride spray as a replacement. He started with one canister for one week and the usage increased to 5 canisters daily as his panic attacks worsened due to shortage of heroin supply.

Upon presentation, his GCS was E1V1M2 with hypotension. He was intubated for airway protection. Blood results showed severe transaminitis, coagulopathy, and metabolic acidosis with acute kidney injury. Patient was extubated

after 4 days of ICU admission with improved organ injuries.

### **DISCUSSION**

Ethyl chloride (C<sub>2</sub>H<sub>5</sub>Cl) is a colorless gas with strong ether-like odour that has been utilized for industrial purposes. Additionally, it is used widely as a topical anesthetic spray for muscle pain and spasm. Being easily accessible over-the-counter, it has emerged as an inhalant drug for recreational sniffing. It is highly volatile and lipophilic, which makes it reaches bloodstream and central nervous system rapidly. Neurological symptoms such as incoordination, disorientation, unsteady gait, unconsciousness and hallucinations have been reported after acute toxicity, besides liver impairment, cardiac arrhythmias and respiratory depression. The diagnosis of ethyl chloride poisoning is clinical and there is no modality to test on ethyl chloride levels. The mainstay of management is mainly removal from exposure and supportive. Generally, the neurological symptoms improved after weeks, despite deaths have been reported due to fatal intoxications.

### **CONCLUSION**

There is a tendency for drug abusers to switch to easily accessible over-the-counter ethyl chloride muscle spray as a replacement during MCO period. Hence, we must be aware of the side effects and toxidrome which may present to the emergency department as a consequence of drug abuse.

### **KEYWORDS**

Ethyl chloride toxicity, overdose, recreational use