

## Introduction

Malaysia has undergone Movement Control Order (MCO) since March 2020 due to COVID-19 pandemic. The pandemic strikes hard on our socioeconomic status, affecting lives of thousands of population in our country. This case report discusses a heroin abuser who suffer from ethyl chloride spray toxicity, as a replacement to heroin due to inaccessibility.

## Case report

Mr. K, a 29 year old gentleman presented to emergency department with reduced consciousness on the same day. He had multiple episodes of seizure one week prior, associated with abnormal gait, uncontrolled movement and restlessness. He was an active heroin user but had stopped taking them for two weeks due to no supply during MCO. Instead, he took ethyl chloride spray as a replacement. He started with one canister lasting for one week, escalated to 5 canisters daily. The increment in usage correlated with his panic attacks as heroin supply ran out. Upon presentation, his GCS was E1V1M2 with hypotension. He was subsequently intubated for airway protection. Blood results showed severe transaminitis, coagulopathy, and metabolic acidosis with mild acute kidney injury. Patient was admitted to ICU and was extubated after 4 days of admission with improved organ injuries.

## Discussion

Ethyl chloride ( $C_2H_5Cl$ ) is a colorless gas with strong ether-like odour that has been commonly used for industrial purposes. It is used widely as a topical anesthetic spray for muscle pain and spasm nowadays. 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. With limited literature available, neurological symptoms such as incoordination, disorientation, unsteady gait, unconsciousness and hallucinations have been reported after acute toxicity, besides liver impairment and respiratory depression. The diagnosis of ethyl chloride poisoning is clinical and there is no modality to test on ethyl chloride levels in Malaysia. The mainstay of management is mainly removal from exposure and supportive. Generally, the neurological symptoms improved after weeks, despite deaths has 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.

## References

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