

CASE REPORT**A Case Series of Dextromethorphan Abuse***Seed Hon Fei and Thong Kai Shin***Hospital Kuala Lumpur, Jalan Pahang, Kuala Lumpur, Malaysia****Abstract**

Dextromethorphan, an over the counter cough suppressant is gaining popularity among teenagers and young adults because of its easy availability, relatively low price and most importantly the feeling good effects that it brought when used in megadoses. We are reporting three cases of dextromethorphan abuse and its clinical presentations. We discussed about the factors that contribute to the current situation of uncontrolled usage of dextromethorphan in our population especially in Sarawak. We also looked into some of the steps that we can take in order to prevent the situation from becoming worse.

Keywords: Abuse, Dextromethorphan, Sarawak

Introduction

The problem of drug addiction is worsening in Malaysia especially in the State of Sarawak, with an increasing number of youths and children being lured into it. Dextromethorphan (DXM) is a drug that is easily available as a single product over the counter and has gained popularity among middle and high schools students [1]. DXM is a cough suppressant and is commonly used to treat coughs in adults and children [2]. DXM is an opiate agonist analgesic and the average adult anti-tussive dose is 15 - 30mg (half to one tablet) taken 3 to 4 times a day. A megadose of DXM is described as 5 to 10 times the dose recommended for control of coughs [3]. Acute megadose of DXM have profound physiological and psychological effects similar to those of phencyclidine, a hallucinogen [3]. In high doses, the effect of DXM may include

induction of an out-of-the-body dreamy state, disorientation, depersonalization, confusion, somnolence or stupor, impaired coordination, agitation, distortion of motion or speech, and hallucination and agitation [3]. This case series highlighted three cases from Hospital Sentosa Kuching, Sarawak that are related to DXM abuse and its presentations.

Case 1

Mr. M is a 34 years old Malay man. He is a divorcee and currently unemployed. He started abusing DXM at the age of 17 years old. He used to take it 3 to 4 times a week, 10 tablets each time to feel good. Mr. M felt relax and calm immediately after taking the tablets. Currently, he needed the tablets to enable him to work better at night as a security guard. He experienced auditory and visual hallucinations several hours after the intake of DXM and these experiences lasted

for few hours up to a day. At times, family noticed him to have self talking, easily irritable and restless after taking the tablets. But all this abnormal behaviors subsided after a day or two. Mr. M denied taking other illicit substances.

Case 2

Mr. HR is a 23 years old Malay gentleman. He has been abusing tablets DXM for the last 3 years. He used to take 12 to 13 tablets each time, up to 4 times a day for stress reduction. Mr. HR wanted the euphoric and relax feelings that he would get after the ingestion. He described it as the best ever feeling he had. As soon as 1 hour after the ingestion, he experienced dissociative effects in which he felt that his soul was leaving his body and floating in the air, free from all the stresses in the world. He experienced auditory hallucinations and claimed that the voices would lasted approximately for 1 day but that did not stopped him from continuing to abuse DXM. He had easy access to DXM as he could purchased the tablets over the counter in his community pharmacy. He craved for the tablets all the time.

Case 3

Mr. Z is a 29 years old Malay gentleman. He is a polysubstance abuser who abused crystal methamphetamine, DXM, alcohol and nicotine. He has abused DXM for the past 4 years. However, he only took the DXM tablets whenever he had no supply of his crystal methamphetamine and he would take 10 tablets each time. He felt relaxed and experienced euphoria that would last for approximately 8 hours. Sometimes, he experienced auditory hallucination after the ingestion that lasted for few hours.

Discussion

DXM abuse is getting rampant especially amongst teenagers and young adults in Sarawak. People are abusing it to feel good and to escape from the stresses in life. Enforcement and medical professionals are looking into it seriously because of this excessive usage in the population. Several factors for this uncontrolled usage have been identified and will be discussed here.

Sarawak is the largest state in Malaysia but because of its vast land area, provision of government health care services are limited and the most accessible primary health care services that are easily available to the local population are the community pharmacies and private clinics. These pharmacies and private clinics play a significant role in delivering health care services to the people of Sarawak. However, sadly, approximately 50% of community pharmacies and 49% - 66% of general practitioners in Sarawak were found to be not fully compliant to the law and regulations with the main non-compliance issue were the records on the supply of preparations that contain pseudophedrine, ephedrine and DXM [4].

DXM is easily available over the counter. One needs no prescriptions to get to the drug and there is no age restriction as well. The younger age groups think that consuming DXM is safe because it is easily available over the counter. Many teenagers abuse DXM because they have the idea that recreational use of it is relatively safer, as compared to other "illicit" recreational drugs such as methamphetamine and ketamin [1]. Further, DXM is not illegal in Malaysia. We also found that information available on the internet regarding its low price, easy availability, lack of significant physical

dependence and withdrawal have encouraged the recreational experimentation of this drug [1]. All these factors have encouraged the abuse of DXM in our population.

DXM containing prescriptions are regulated in some countries because of their psychedelic effect when consumed for recreational purposes [4]. These medications are actually safe and usually do not cause significance side effects when use as directed [5]. Several steps can be taken to overcome the problems related to DXM in Malaysia. Firstly, legislation limiting the access to DXM containing products will be a good step. For example, those who want to purchase DXM containing products over the counter will need a prescription. Clinicians should also be mindful and do not over prescribed DXM containing products to avoid the risk of abuse. Secondly, in order to prevent over the counter medication abuse among young people, clinician should educate them and their parents about the risks of using over the counter medications and their safe usage [5].

In conclusion, it is time for us all to look into DXM abuse before the situation gets worse.

References

- [1] Chomchai C, Manaboriboon B. Stimulant methamphetamine and

dextromethorphan use among Thai adolescents: Implications for health of women and children. *J. Med. Toxicol.* 2012; 8: 291.

- [2] MN Shadkam, H Mozaffari-Khosravi, MR Mozayan. A Comparison of the effect of honey, dextromethorphan, and diphenhydramine on nightly cough and sleep quality in children and their parents. *The Journal of Alternative and Complementary Medicine* 2010; 16, (7).
- [3] Richard HS. Adolescent Abuse of Dextromethorphan. *Clinical Pediatrics* 2005; 44(7): 565-568.
- [4] EChuo YT, Shing CL, Hiram T, Wei CA, Abu HAAJ. Compliance of community pharmacists and private general medical practitioners with Malaysian laws on poisons and sale of drugs. *Therapeutic Innovation & Regulatory Science* 2017; 51(4): 439-445.
- [5] Sarah CA, John LH, Mary FB. Dextromethorphan abuse and dependence in adolescents. *Journal of Dual Diagnosis* 2010; 6(3-4): 266-278.

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