

# 'CHEMSEX' GAMMA HYDROXYBUTYRATE (GHB) OVERDOSE: A CASE REPORT



MOHD AFIQ MOHD NOR, LEONG YUEN FOONG  
Department of Emergency Medicine, University Malaya Medical Centre,  
Jalan Universiti 50603 Kuala Lumpur, Malaysia.

## INTRODUCTION

Gamma Hydroxybutyrate (GHB), which is commonly known as 'date-rape drug', now is also famous for 'chemsex', a sexual activity engaged under the influence of a drug to enhance pleasure, mostly among men who have sex with men (MSM).<sup>1</sup>

## CASE REPORT

Here, we present a case, possibly the first one in Malaysia, with GHB overdose by a 35-year-old gentleman who presented with a life-threatening condition and required acute care admission. He was brought in unconscious after 4 hours of taking an unknown medication.

Upon arrival, his BP was 128/70mmHg, heart rate was 73bpm, and saturation was 100% on 15L/min oxygen supplement. Both pupils were reactive at 2mm size. Lungs were clear, and abdomen was soft and non-tender. He was subsequently intubated for airway protection. Blood gases and other blood investigations were at an acceptable range. No other toxidromes were observed, and the bedside urine drug test was unremarkable. ECG was sinus rhythm. CT brain also was normal.

Our team was initially clueless until further history from his partner revealed that he had ingested 10ml or approximately 16grams of GHB in a clear liquid form where he bought online for his recreational use. The patient has an underlying retroviral disease and is an active MSM with a single partner.

National Poison Centre was immediately rung, and our team was told that patient was only required supportive treatment. He was discharged well after 48 hours of intensive care monitoring.

## DISCUSSION AND LESSON LEARNT

As GHB also has a sedative-hypnotic effect, its overdose can be easily mistaken with other common drugs such as opioids or benzodiazepine.<sup>2</sup> However, it is distinguishable by the rapid recovery of clinical conditions because of its short plasma elimination half-life.<sup>3</sup>

The toxidromes, if one takes more than 5grams, are central nervous system depression, pupillary changes, bradycardia, and Cheyne-Stokes respiration.<sup>4,5</sup> There is no antidote available, and the management is limited to supportive care.<sup>6</sup>

Even though GHB consumption has been highlighted in the past 15 years, overdose cases are still uncommon here.<sup>7</sup> Emergency medical personnel should be aware of its illicit use especially among a certain group of people, the toxidrome presentations and mimics.

## DECLARATION

The authors have nothing to disclose.

## ACKNOWLEDGEMENT

Special thanks to Universiti Malaya Medical Centre, National Poison Centre, Lecturers, Family and Colleagues.

## REFERENCES

1. McCall H, Adams N, Mason D, Willis J. What is chemsex and why does it matter? *BMJ*. 2015 Nov 3;351:h5790. doi: 10.1136/bmj.h5790. PMID: 26537832.
2. Couper FJ, Thatcher JE, Logan BK. Suspected GHB overdoses in the emergency department. *J Anal Toxicol*. 2004 Sep;28(6):481-4. doi: 10.1093/jat/28.6.481. PMID: 15516299.
3. Van Sassenbroeck DK, De Neve N, De Paepe P, Belpaire FM, Verstraete AG, Calle PA, Buylaert WA. Abrupt awakening phenomenon associated with gamma-hydroxybutyrate use: a case series. *Clin Toxicol (Phila)*. 2007 Jun-Aug;45(5):533-8. doi: 10.1080/15563650701365818. PMID: 17503262.
4. Schep LJ, Knudsen K, Slaughter RJ, Vale JA, Mégarbane B. The clinical toxicology of  $\gamma$ -hydroxybutyrate,  $\gamma$ -butyrolactone and 1,4-butanediol. *Clin Toxicol (Phila)*. 2012 Jul;50(6):458-70. doi: 10.3109/15563650.2012.702218. PMID: 22746383.
5. Simone CG, Bobrin BD. Anxiolytics and Sedative-Hypnotics Toxicity. [Updated 2021 Sep 1]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK562309/>
6. Traub SJ, Nelson LS, Hoffman RS. Physostigmine as a treatment for gamma-hydroxybutyrate toxicity: a review. *Journal of toxicology. Clinical Toxicology*. 2002 ;40(6):781-787. DOI: 10.1081/clt-120015839. PMID: 12475191.
7. Nordin, S. (2012, March 26). Date rape. MyHealth Portal. Retrieved September 1, 2021, from <http://www.myhealth.gov.my/en/date-rape/>