

# LIFELINE IN THE SKY: AIR TRANSPORT OF ANTIDOTE FOR ARSENIC POISONING

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## Introduction

Arsenic poisoning is a global issue, affecting many through environmental and occupational exposure, as well as intentional acts like suicide or homicide. The local and systemic manifestations vary based on several factors, including the quantity ingested, duration of exposure, and the chemical state of the arsenic.

## Case Description

A 14-year-old boy presented to our centre, Hospital Lahad Datu, 1 hour post incidental ingestion of arsenic-based pesticide. Patient mainly exhibited gastrointestinal symptoms and was resuscitated accordingly with crystalloid and oxygen support. "Pusat Racun Negara" was alerted and subsequently, case was discussed with Consultant Toxicologist. It was advised then for administration of chelating agent (Dimercaprol) within 6 to 8 hours post arsenic exposure for 48 hours.

Unavailability of the antidote in our centre prompted a collaboration with Hospital Queen Elizabeth, Kota Kinabalu, in which a mercy flight by The Royal Malaysian Navy was arranged to have the antidote flown to our centre. The first dose intramuscular (IM) Dimercaprol was successfully administered in our Emergency Department approximately 6.5 hours post ingestion.

Treatment with IM Dimercaprol continued for 48 hours followed by prolonged chelation therapy throughout admission, a decision made based on clinical judgement. Whilst admitted, he developed multiple complications of arsenic toxicity which include kidney injury; however, not requiring dialysis; transaminitis and bilateral sensorineural hearing loss. The case was co-managed by multidisciplinary teams. Miraculously, after 1 month of admission, he was asymptomatic and was discharged well.

## Discussion

Dimercaprol neutralise heavy metal by forming a stable five-membered ring between its sulfhydryl groups with heavy metals, promoting its elimination (1). Early initiation of chelation therapy following arsenic exposure demonstrated a positive impact on patient outcomes and was made possible in this case with air transport of the antidote.

## Conclusion

Despite having limited resources, district hospitals in Sabah strive in providing optimal patient care and treatment. The advancement of technology, particularly in air medical transport, plays a crucial role in addressing these healthcare gaps, improving patient prognosis by providing timely access to specialized care.



### Reference:

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### Keywords:

- Arsenic, poisoning, toxicity, air medical transport

