

Evaluate the impact of hospital types on the availability of antidotes for the management of acute toxic exposures and poisonings in Malaysia

Sulaiman I Al-Sohaim, Rahmat Awang, Sa'ed H Zyoud, Sazaroni Md Rashid and Sirajuddin Hashim
Hum Exp Toxicol published online 8 April 2011
DOI: 10.1177/0960327111405861

The online version of this article can be found at:
<http://het.sagepub.com/content/early/2011/04/08/0960327111405861>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Human & Experimental Toxicology* can be found at:

Email Alerts: <http://het.sagepub.com/cgi/alerts>

Subscriptions: <http://het.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

>> [Version of Record](#) - Apr 8, 2011

[What is This?](#)

Evaluate the impact of hospital types on the availability of antidotes for the management of acute toxic exposures and poisonings in Malaysia

Sulaiman I Al-Sohaim¹, Rahmat Awang¹,
Sa'ed H Zyoud¹, Sazaroni Md Rashid¹ and
Sirajuddin Hashim²

Abstract

Introduction: The availability of antidotes may be considered essential and lifesaving in the management of certain poisonings. Surveys carried out in a number of countries have demonstrated inadequate availability of a variety of poisoning antidotes. **Objectives:** The purpose of this study was to determine the availability of antidote stocking at hospitals, based on published guidelines for antidote stocking, and to evaluate the impact of hospital types on the availability of antidotes for the management of acute toxic exposures and poisonings in Malaysia. **Methods:** A questionnaire on the availability of antidotes was sent to all government accident and emergency departments in Malaysia. The list of commonly required antidotes and essential drugs was compiled from published guidelines. Collected data were analysed in SPSS version 16 using descriptive and comparative analysis. **Results:** The response rate was 59.06%. None of the responding hospitals stocked all of the antidotes on the lists. In relation to hospital type, there was great variability in the availability of antidotes (there were significant differences between hospitals for 13 antidotes). The availabilities of most antidotes were far better in the General Hospitals and the District Hospitals with specialists compared to District Hospitals without specialists. Calcium gluconate, sodium bicarbonate, atropine sulphate, naloxone, flumazenil, vitamin K, and pyridoxine were available at all general hospitals. Atropine sulphate and naloxone were available at all district hospitals with specialists. **Conclusion:** Most Malaysian government hospitals stocked some important antidotes. Raising awareness of the importance of antidotes by education, regular review of antidote storage, distribution plans, and appropriate legislation might provide solutions. Coordination between Malaysian hospitals and the National Poison Centre at Universiti Sains Malaysia is also important.

Keywords

antidotes, availability, hospital, Malaysia, poisoning

Introduction

Antidotes can be used to reverse the pharmacological effects of a particular poison, to displace a poison from its target organ receptor site, or to deactivate the poison by binding irreversibly to affected molecules.¹ Not all toxic substances have antidotes, thus making the use of such a technique is considered a specific treatment.² Some patients can recover fully without the use of antidotes.¹ If an antidote is required, its administration should be carried out as early as possible.³

¹ WHO Collaborating Centre for Drug Information, National Poison Centre, Universiti Sains Malaysia (USM), Penang, Malaysia
² Disease Control Division, Ministry of Health, Kuala Lumpur, Malaysia

Corresponding author:

Rahmat Awang, WHO Collaborating Centre for Drug Information, Clinical Toxicology Program, National Poison Centre, Universiti Sains Malaysia (USM), 11800 Penang, Malaysia
Email: rahmatawang@yahoo.com