CHALLENGES AND OPPORTUNITIES IN HANDLING MUSHROOM POISONING CASES IN MALAYSIA: SHARING OF EXPERIENCES

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Objectives: Malaysia has a temperate and humid weather all year round, an ideal condition for mushrooms to thrive. Mushrooms are commonly found growing everywhere in Malaysia, including the poisonous species, though these have not been properly documented. The aim of this study is to evaluate mushroom poisoning incidents in Malaysia and to share the experiences of dealing with such cases despite limited references and available expertise.

Methods: This is a retrospective study analysing poisoning data from cases referred to the Malaysia National Poison Centre (NPC) between 2006 and 2014.

Results: Between 2006 and 2014, 157 cases of mushroom poisoning were reported to the NPC. Majority (79.6%) of the cases involve adult. Ethnically, the Malay population represent the highest contributor to the incidents (39.6%), compared to Indian, Chinese and others (11.6%, 8.3% and 15.3% respectively). Most of the reported cases occur in the month of September (15.3%).

Discussion: Identifying toxic mushroomis not easy, as it requires macroscopic and microscopic examination. Since 2014, a fungi taxonomist in Universiti Sains Malaysia has helped to identify unknown mushroom species from images provided by the NPC. In one case it was discovered that *Chlorophyllum molybdites* was mistakenly reported as *Lepiota sp* (parasol mushroom)by the reporting officer because of the near semblance of one to the other. In another case, the fungi taxonomist identified a *Chlorophyllum molybdites* (based on photos),but advised the NPC to observe for delayed symptoms to determine if the species was *Chlorophyllum sp* or *Amanita sp*. In another instance, *Inocybe asterospora (*based on photos sent for identification*),* turned outto be *Inocybe lacera* after the actual sample arrived almost 24 hours later.

These few examples have clearly shown that the NPC needs experts, including the expertise of a fungi taxonomist since mushroom poisoning is a seasonal occurrence in Malaysia. The appointment of the fungi taxonomist as an associate member of the NPC has enhanced the centre's knowledge on mushroom poisoning through organised talk, seminars, preparation of guideline for doctors wishing to submit pictures of unknown mushroom for identification, and advice on the proper storage of mushroom samples.

Conclusion: Identifying the species and toxins of Malaysian mushrooms is challenging, in part, due to limited references which also hamper and delay the process. The NPC aspires to embark on comprehensive compilation of Malaysian poisonous mushrooms from reported cases and samples it receives for examination and consultation.