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Electrolytes imbalance in saltwater near-drowning victims: Summarization on Thai reports

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Dear Editor.

Drowning and near-drowning is an important problem in any coastal countries. In Thailand, there is a long coastal line covering more than two thousand kilometers length. There are many cases of sea drowning and near-drowning annually. However, there are limited reports on the clinical features. Here, the authors try to summarize the information on electrolytes imbalance in saltwater near-drowning victims in Thailand. The authors used standard search engines (PubMed and Thai Index Medicus) for searching the reports of drowning from Thailand. The summarization on all available literature was done in order to assess the clinical data on seawater near-drowning cases. According to this work, there are at least 2 reports on 49 cases of seawater near-drowning[1-3]. Of those 49 cases, the data on electrolytes imbalance could be seen as the following: 16.3% hypokalemia, 24.5% hypernatremia, 30.6% hyperchloremia and 57.1% hypobicarbonatemia. This finding is similar to a recent report by Lee[4]. Indeed, the observation of hypernatremia is a significantly pathognomonic observation in patient with seawater near-drowning comparing to fresh water near-drowning[4]. Yajima et al. also reported that the value of electrolytes in pleural fluid in death cases can be helpful for diagnosis of seawater drowning[5].

Conflict of interest statement

We declare that we have no conflict of interest.

References

- [1] Yongsiri S, Dinchuthai P, Thammakumpee J, Prongnamchai S, Chueansuwan R, Tangjaturonrasme S, et al. Electrolytes imbalance in saltwater near-drowning victims in the Gulf of Thailand. J Med Assoc Thai 2013; 96(10): 1268-72.
- [2] Thadakul N. [5-year (2003-2007) retrospective study on drowning pediatric patients admitted at Vajira Phuket Hospital]. Med J 2008; 22(2 Suppl): 650-8. Thai.
- [3] Queen Sirikit Hosp J. [Drowning and near drowning patients]. 2014; 1(2): 1-2. Thai.
- [4] Lee KH. A retrospective study of near-drowning victims admitted to the intensive care unit. Ann Acad Med Singapore 1998; 27(3): 344-6.
- [5] Yajima D, Saito H, Sato K, Hayakawa M, Iwase H. Diagnosis of drowning by summation of sodium, potassium and chloride ion levels in pleural effusion: differentiating between freshwater and seawater drowning and application to bathtub deaths. Forensic Sci Int 2013; 233(1-3): 167-73.

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