Chemical Response Emergency Medical Information System in Chemical Disaster

Mr. Soon-Joo Wang1, Mr. Seongyong Yoon2
1 Hallym University, Hwasong, South Korea
2 Sooncheonhyang University, Gumi, South Korea

Introduction: There are many database sets and websites which provide chemical information, but they do not perform an adequate role for emergency medical support in a chemical disaster.

Aim: To make the basis of a chemical emergency medical information system.

Methods: We reviewed the database sets, mobile applications and websites in the world which provide chemical database and emergency medical response information from a chemical accident or disaster site to hospitals. Also, we examined chemical accident cases which developed during disasters. A chemical database set for emergency medical response was proposed and the algorithm for elicitation of chemicals suitable for emergency medical response and information providing. We performed a survey about chemical emergency medical information system to related personnel.

Results: By four steps of elicitation of chemicals, the number of chemicals more than 100,000 was decreased to less than 1,000. The standard of steps includes accident preparedness, toxicity and circulating amount and expert consultation. Algorithm for elicitation of chemicals was made and 82% of related personnel supported the chemical emergency response algorithm. The emergency medical real-time consultation system for chemical disaster was placed under control of the call center.

Discussion: When mass exposure by toxic chemicals occurs, the chemical emergency medical information system will be helpful for acute identification of chemicals, protection of related personnel and emergency medical response. Also, it can be possible to guide citizens immediately in case of a chemical disaster.

Prehosp Disaster Med 2019;34(Suppl. 1):s107–s108
doi:10.1017/S1049023X19002255