

cancerisation is multiplied by 1,000.

Therefore, any ingestion of major caustic substances by children is serious. The clinical signs are to be accurately searched for, and a premature complication must be avoided. An endoscopic investigation in a specialised unit is necessary. More binding commercial legislation (as for dilution, presentation, and distribution) would be useful.

**Key words:** caustics; children; complications; endoscope; ingestions; pathology

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### Rescue Clearing in Lyon in the Twentieth Century

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Several dramatic landslides occurred in Lyon in the 20th century. Expert's reports were obtained on many of them. These catastrophes claimed 40 casualties in 1930, 30 casualties in 1932, and 3 in 1977. Other landslides occurred, but claimed no casualties.

The general interpretation of the accidents indicates that these landslides are not inevitable. The weak points are the nature of the ground, the age of the buildings, and the existence of 2,000-year-old subterranean galleries. Hence, more than 30 landslides occurred on Lyon hills in 1983, due to an exceptional amount of rainfall. As for prevention, some parameters—such as the maintenance of the walls and of the drainage network—can be mastered and the emptying of waters through cesspools also needs to be suppressed. On the other hand, since the catastrophe of 1930, a Technical Committee (Commission des Balmes) has been created. Its role is to check the solidity of the buildings on the concerned hills, and to define risk areas (setting of ground instability levels of assumption, granting of construction licenses).

Firemen are trained for rescue clearing at different levels: from elementary training to upgraded levels. There are several rescue units—a team unit, a group unit, and a section unit—and their equipment includes—ropes, pulleys, beams, and listening devices for searching for buried people. The vehicles all are appropriate: light colored for recognition and of average weight for first aid equipment, and large ones for logistical support. For large-scale catastrophes, specialized units are available to firemen: rescue clearing mobile column (by rail or road), and specialized airlifted detachments (for helping other countries). These particular rescue means can have quite short intervention delays and are autonomous on-site. When several rescue detachments are acting in a same area, an operating coordination advanced detachment ('Détachement avancé de coordination opérationnelle'—DACO) coordinates the intervention of the various units and communicates with local authorities. A medical support detachment ('Détachement d'appui médical' or DAM) is required, and takes charge of an advanced medical post that ensures the triage and the treatment of the victims who, once stabilized, are evacuated. The rapid medical intervention civil security element ('Élément de sécurité civile rapide d'inter-

vention médicale'—ESCRIM) is a surgical technical platform whose hospital staff aims at operating upon some of the victims coming from the DAM. Responding to the geological and geotechnical risks of Lyon hills and to experts' reports, the firemen's rescue operating seems to look appropriate, for local interventions as well as for external ones. Prevention, as a result of Lyon experiences, also seems effective: the number of catastrophes and their human effects have decreased.

**Key words:** casualty clearing; firefighters; interventions; landslides; logistics; preparedness; rescue; responses

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### Construction of a Medical Evacuation System in Case of Air Raid on Cities

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**Introduction:** A Medical Evacuation System refers to the organizing and operating a system for evacuating for the sick and wounded during wartime. When the number of the nonaffected is large, the rational deployment of the medical evacuation system, on one hand, determines whether medical treatment will be implemented fully; on the other hand, it plays an important role in speeding up medical rescue.

**Hypothesis:** In accordance with the features of contemporary, high-tech regional, war, air raid in cities, and taking such factors as city size, population density, and defense levels into account, the paper is devoted to the discussion on how to achieve a rational medical evacuation system. It proposes that in small cities a two-level medical rescue—rescue at the scene and treatment in medical organizations—is effective. In mid-sized or large cities, a three-level medical rescue—rescue at the scene, emergency treatment in medical stations and special treatment in hospitals—is effective. Moreover, the paper outlines the differences in the tasks of the respective levels of rescue.

In addition, in order to fulfill a rational deployment of medical organizations and to guarantee good quality of medical treatment, the following measures should be brought about:

1. Estimating nonaffected according to anti-air raid plan
2. Carrying out army-civilian joint rescue
3. Standardizing medical evacuation documents and checking accuracy of enrollment statistics of military medicine
4. Implementing military organization and equipment, performing stimulated training in order to reach a quick reaction

**Key words:** air raid; care levels; civilian; evacuation; military; records; rescue; war

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