mainly in Athens General Hospital and KAT Accident Hospital.

In less than two-and-one-half hours from the time of the accident, the use of burn resuscitation fluid formulas were commenced and, as a result, none of the patients died within the post-burn shock period. The main effort of the medical team was to maintain the respiratory function in most of the patients, since they all suffered from inhalation injuries. Despite early initiation of mechanical ventilation and pulmonary lavage, all patients of TBSA >70% died of acute respiratory distress syndrome (ARDS) and pulmonary complications.

The position of the workers within the plant at the time of the accident was proportional directly to the severity and outcome of the injuries. As the mapped diagram shows, all workers within the core of the explosion died, whereas those in the perimeter suffered less severe burns and eventually survived.

In conclusion, the combined effort of the NHS ambulances, the medial crush teams, the Athens Fire Brigade and Traffic Police forces and, last but not least, the medical and nursing staff of the Athens Burns Units, managed to transfer, resuscitate, and hospitalize burn victims from a major disaster.

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Smoke Inhalation in Deep Burns: An Algorithm to Predict the Severity of Lung Injury and Its Outcome

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Introduction: Smoke inhalation is a major factor in fire-related morbidity and mortality. The toxicity of smoke results from inhalation of irritants, toxic chemicals, and hypoxic gas mixtures.

Methods: Retrospective review was made of the charts of all patients admitted to this regional intensive care unit (RICU) with diagnoses of burns associated with smoke inhalation between May 1988 and February 1990, in order to determine parameters that would predict the severity of lung injury and its outcome.

Results: Data were collected retrospectively on 10 patients who were classified into two groups: five patients with acute respiratory distress syndrome (ARDS) and five patients without ARDS. They were analyzed for age, gender, BSA, bronchoscopic findings of smoke inhalation, immediate respiratory complications (aspiration, pneumothorax), need for immediate intubation, use of steroid therapy, and days in RICU. The results suggest that the percentage and degree of burns, as well as the level of bronchoscopic findings of smoke inhalation, are important determinants in the severity of the disease. The need for early intubation or the use of steroid therapy may not modify the outcome.

Conclusion: This algorithm may assist the physician in determining the steps of treatment in such complicated cases.

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The Clinical Spectrum of Accidental Inhalation of Chlorine Gas

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Introduction: On 10 June 1991, six tons of liquid chlorine leaked from a tank car through a ruptured pipeline. The chlorine cloud soon covered the plant and caused a worker's death. More than 500 nearby residents visited medical clinics for help during the three days following the incident.

Objective: To describe the clinical presentations of chlorine gas exposure on residents living near a chemical plant after an accidental release of chlorine.

Methods: The medical records of these patients were reviewed and the results of a self-answered questionnaire concerning the course of clinical presentation were analyzed.

Results: The major symptoms experienced in the first day after exposure were respiratory (90%), gastroenteral (68%), and eye (60%). Non-specific symptoms such as dizziness, weakness, and headache also were reported by most residents (76%). Most symptoms were relieved within six days. The 50% recovery time for eye symptoms was shortest (two days), followed by gastroenteral (3 days), and respiratory (4 days). There was a major inconsistency between medical records and self-reported symptoms in eye discomforts. No eye symptoms were recorded in the charts, however, 60% of the patients reported eye problems.

Conclusion: Acute exposure to chlorine gas among residents in an industrial accident on this scale might not result in severe health effects. A well-prepared disaster plan definitely will benefit residents living in close proximity to industrial parks.

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Nebulized Corticosteroid Improves Pulmonary Function After Chlorine Gas Exposure in Pigs

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Objective: To optimize the treatment after toxic-gas exposure and to evaluate an easily available therapeutic alternative in mass casualty situations.

Methods: Thirty-six pigs were exposed to a sublethal dose of chlorine gas and then observed for six hours during anaesthesia and mechanical ventilation. Twenty-six were given nebulized corticosteroids with a high local anti-inflammatory potency at different time intervals after the injury. Ten pigs served as a control group with no treatment. Changes in lung mechanics, gas exchange, and hemodynamics were followed over a six-hour observation period.

Results: Corticosteroid inhalation after chlorine gas exposure significantly reduced the impairment of respiratory function and stabilized hemodynamics. Early treatment improved the results.

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