

Conclusion: A team from different specialties should be in charge for every patient. The work of this team should be coordinated by one agreed-upon consultant to avoid unnecessary confusion.

Keywords: disaster management; in-charge physician; intensive care; surgical specialties; teams; trauma

G-6

The Role of the Teaching Hospital in Subacute Phase of the Great Hanshin-Awaji Earthquake

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Introduction: After the Great Hanshin-Awaji Earthquake (magnitude: 7.2 on Richter scale) on 17 January, 1995, a total of 45,000 of the involved population of more than 400,000 in Nishinomiya City took shelter in 176 public buildings. Hyogo College of Medicine, located in the City, organized medical support teams on 23 January with two objectives: 1) to give medical services in evacuation centers; and 2) to shift these services smoothly from on-site clinics to recovering local medical facilities. This study was aimed at clarifying the role that the teaching hospital can play in the subacute phase of a major earthquake.

Method: We assessed these activities retrospectively by reviewing the official College Report and the medical records. After the project, we sent questionnaires to the members of the hospital staffs for contributions of important points and problems.

Results: On 24 January, we sent more than 100 College physicians to the evacuation centers to survey the medical requirements. From 25 January to 15 March, we dispatched a total of 1,034 physicians and 624 nurses to 1,080 centers, and a total of 3,787 patients were examined and treated. The diseases most commonly encountered were upper airway infections, hypertension, and gastroenteritis. Our activities also had a big impact toward beginning on 26 January, official meetings between city authorities, local medical societies, volunteer groups, and our College hospital. The average frequency of consultation by patients was 2.5 during the first week, decreasing gradually to 1.1 during the fifth week. The rate of the referred patients to the local clinics increased from 0% during the first week to 12.3% during the fourth week.

Three quarters of 1,052 questionnaires were completed. It was evident that while the start of our activities was late, the time of withdrawal of the support was appropriate.

Conclusions: In the subacute phase of a major earthquake, a teaching hospital can provide medical services to many people, organize local medical resources, and support local clinics by referring patients from on-site clinics. But, an earlier start of the medical activities by a teaching hospital is appropriate.

Keywords: consultations; earthquake; hospital, teaching; medical college; medical support; shelters, use of; shelters, medical care for; subacute; university

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The Geotechnical Risk Analysis of Hospitals in Kobe City Using a Geographic Information System

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Kobe University Research Center for Urban Safety and Security has been developing a geographic information system (GIS), called JIBANKUN, which stores the geotechnical information over all the areas of Kobe City, Japan. The GIS also contains the information on the damages of all the structures such as buildings with the three levels of damage: 1) minor; 2) medium; and 3) major, which were caused by the Great Hanshin-Awaji Earthquake (Kobe quake) in 1995. Moreover, this GIS has been extended to contain the information related to medical disaster response. So far, the locations and the capabilities of all the hospitals or clinics in Kobe City are stored in the GIS. The computer simulations based on such extension enabled us to analyze the geotechnical risk of a hospital in terms of liquefaction of the grounds around the hospital. The quantified risk of liquefaction can be applied to prepare for planning of medical disaster response.

Coupled with the data of human casualties in the Kobe earthquake, the geotechnical risk analysis of hospitals indicates a future potential to exploit a new direction of disaster epidemiology.

Keywords: earthquake; epidemiology; future; geographic information system; geotechnical risk; liquefaction; risk analysis

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Injury Control: A Role for Occupational Medicine in Hospital Disaster Response

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