

lishing a support system to provide appropriate emergency dental care to victims of large-scale, natural disasters in cities.

**Keywords:** dental care; dentists; disaster; earthquake; infections; maxillofacial trauma; mobile offices; periodontitis; pulpitis; support systems

#### General Session VIII

#### Flood Disasters

Tuesday, 11, May, 8:00–9:00 hours

Chair: K. Joanne McGlown, Tadashi Yashuda

#### G-38

#### Consideration of Social Property on the Disaster Medicine of Flood and Waterlogging

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Natural disasters such as floods, droughts, earthquakes, hailstones, storms, forest fires, and so on usually cause great destruction that affects the living of humankind and social development. The floods of 1991 in the low reach, and in 1998 in the upper and middle reaches of Yangtze River as well as in Northeast China's Nenjiang and Songhua Rivers, have resulted in huge, direct economic losses, personnel injuries, and deaths. On the one hand, implementation of Disaster Medicine can reduce effectively the mortality rate of victims in the flooded areas. On the other hand, Disaster Medicine not only consists of the performance of cardiopulmonary resuscitation (CPR) on the site, but also to provide for disaster relief under strong, organized leadership, unified command, and effective coordination. From the experience of the battle against floods in 1998, the authors believe that the following essential factors must be observed in order to strive for victory against floods:

- 1) Establish a lead group that consists of health administration, the departments of medicine, and the Logistic Health Unit of the related military command that is responsible for implementation of first aid on-site, hygiene, medical supplies, patient transportation, etc.;
- 2) Foster a dedicated spirit among medical team members and other volunteers, and to assume the responsibility for the life and the belongings of victims;
- 3) Popularize training in CPR methods, and raise the consciousness of self- and mutual-aid in the whole population;
- 4) Conduct a series of hygiene measures as early as possible in order to prevent epidemic outbreaks; and
- 5) Guarantee communications and logistic support.

In summary, we should emphasize the social property of Disaster Medicine, and organize and mobilize every effort into the action of disaster relief.

**Keywords:** cardiopulmonary resuscitation (CPR); communications; coordination; disaster; disaster medicine; first aid; epidemics; floods; lead agency; logistic health units; mutual aid; organization; supplies; transportation

#### G-39

#### A Clinical Analysis of Hospitalized Patients during the Flood in Uijungbu City, Korea

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**Background:** Flood is the most common natural disaster in Korea, but few descriptions about the flood-related injury, illness, and medical requirements are noted. We will describe the type of medical care provided to a community in the chaos caused by flood.

**Methods:** Five emergency physicians reviewed the medical records of and interviewed the patients who were admitted from 05 August to 14 August 1998 in eight hospitals in Uijungbu City.

**Results:** This study involved 102 patients, 53 male and 49 women, age from one to eighty-two years. Most of the patients had minor problems, and <3% of them required critical care. Based on the principal diagnosis, the proportion of patients who were admitted was as follows: 1) lacerations, 39.2%; 2) contusions, 22.5%; 3) fractures, 13.7%; 4) infectious disease, 7.8%; 5) ligament rupture, 7.8%; 6) aggravation of chronic illness, 5.9%; 7) dermatitis, 2.0%; and 8) traumatic hyphema, 1.0%. The lacerations occurred in the: 1) foot, 37.9%; 2) lower leg, 27.0%; 3) thigh, 16.2%; 4) hand, 10.8%; and 5) head, 8.1%. The Achilles tendon was the most frequently injured ligament (62.5%), followed by the hand, 25%, and the knee, 12.5%. Of the flood-related laceration patients, 67.5% had progressed to cellulitis, especially sutured wounds, and a patient developed typical tetanus. Of the hospitalized patients, two patients were suspected to have developed post-traumatic stress disorder (PTSD).

**Conclusion:** Most of the flood-related illnesses and injuries were not critical and education about injury prevention such as wearing of shoes and clothes in the submerged area might lower the incidence of accidents. Even simple lacerated wounds should be irrigated and debrided thoroughly and left for delayed closure with tetanus immunization. Although of low incidence, psychological health support also is needed.

**Keywords:** floods; hospitals; illnesses; incidence; injuries; Korea; post-traumatic stress disorder (PTSD)

#### G-40

#### Facing Disasters: Hurricane Mitch: The Costa Rican Experience

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Costa Rica is located in the narrow Central American isthmus and was indirectly affected by Hurricane Mitch