

and, finally, 5) Communication from EMS personnel at the site to their families. The only difficulty with portable cellular telephones was limited battery life which was solved by providing DC (direct current) recharging equipment. In areas where cellular telephone service is available, cellular technology can be a valuable communication tool in disaster management.

IMPLEMENTING AND TESTING THE NATIONAL DISASTER MEDICAL SYSTEM WITHIN A REGION

**William E. Clark, M.S., R Adams Cowley, M.D.,
Thomas P. Reutershan, M.S. and M.H. Estep,
Baltimore, Maryland, U.S.A.**

The United States is implementing the National Disaster Medical System (NDMS) to provide a nationwide network of hospital and medical response capability to care for casualties of a catastrophic medical emergency. A major NDMS exercise was conducted in Prince George's County, Maryland in July 1986 that simulated a fire and explosion at a crowded rock concert. This massive disaster exercise tested emergency response systems in the local jurisdictions and at the federal level. More than 600 moulaged casualties were triaged, treated and transported to more than 50 hospitals in a three-state area during a 6-1/2 hour period. Transportation of patients included the utilization of ambulances, buses, helicopters, a C-130 aircraft, and a specially configured train. A variety of communications systems were used to provide linkages with participating hospitals. Approximately 70 principal representatives of various public and private sector organizations worked together to develop and integrate planning efforts.

CENTRAL VENOUS PRESSURE MONITORING IN HEAT STROKE PATIENTS DURING THE PILGRIMAGE (HAJJ) IN SAUDI ARABIA: A SIMPLE GUIDELINE FOR INDIVIDUAL FLUID REPLACEMENT

Mohamed A. Seraj, M.D., Riyadh, Saudi Arabia

To date, standard treatment of heat stroke at the Hajj resuscitation centers has included body surface cooling combined with rapid intravenous infusion of

3 to 4 liters of crystalloids solution at room temperature which resulted in acute overload problems such as heart failure, edema and pneumonia.

Uncontrolled infusion of such generous quantities of crystalloids is hazardous in patients suffering from concomitant disease, and especially in those with a previously compromised cardiovascular system. Safe fluid management in such cases demands careful monitoring of the central venous pressure to ensure against acute fluid overload. The authors therefore conducted a study to monitor CVP and administer fluids in a controlled manner during heat stroke resuscitation. In this study, 32 patients were randomly monitored and it was found that most of the patients were fluid depleted and required only 1-1.5 liters of fluid during an average cooling time of 1 hour. Thus, this study confirmed that unmonitored fluid therapy is hazardous and may increase the preventable morbidity and mortality.

BLUNT MASSIVE PANCREATIC TRAUMA

Om P. Sharma, M.D., Toledo, Ohio, U.S.A.

Pancreatic trauma entails careful, aggressive management with timely surgical intervention. Pancreatic trauma can be frequently overlooked or underestimated leading to potentially disastrous complications. A few cases of major blunt pancreatic trauma are presented and management reviewed. Prolonged Total Parental Nutrition with adequate nasogastric decompression have changed the outlook for many potential disasters.

AN UNUSUAL EPISODE OF MASSIVE INTOXICATION WITH BARIUM SALTS USED AS ROUTINE CONTRAST MEDIA FOR X-RAY GI SERIES

**Jose Saldias, M.D., Maria Diaz, M.D. and
Freddy Medina, M.D., Lima, Peru**

We report an unusual episode of massive barium salt intoxication, used as routine contrast media for X-ray GI series.

On August 17th and 18th, 1982, GI X-ray series were performed on a group of patients on an ambulatory basis. They received soluble barium salts, sold to