an analyses of social adaptability for the disabled child; and 6) an estimation of need for prosthetics and subsidiary means. The database is used for guiding long-term, national programs, and for estimating the expenses of the material resources required for their use.

The database is designed for IBM-compatible, personal computers. The software is written in FoxPro 2.6 for Windows and operates under MS DOS. Transmission of information is provided to the Russian Centers for Disaster Medicine System for consultative purposes about children, victims in disasters using the INTERNET. Subsequent development will allow members of a co-operative network an opportunity of teleconsultations and teleconferences (presently done off-line).

Key Words: disaster medicine; database; disabled children

Treatment of Children with Severe Compression Trauma

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During earthquakes (Armenia, 1988; Georgia, 1989; Sakhalin Island, 1995) and following apartment block explosions (Svetogorsk, 1995; Kaspiysk 1996), the incidence of compression trauma among hospitalized children was 24%. The prevailing cases suffered injuries of the extremities (>90%) accompanied by ischemic neuritis. There were 3–4 times more injuries of the lower extremities than those of the upper extremities, and 15.6% of the injured had fractures of long tubular bones.

The most common surgical procedure performed was fasciotomy (32.9%). After fasciotomy, 11% of the children had purulent wound complications. The best results were achieved using the so-called "subcutaneous" technique. The rate of amputations in the children with compression trauma ranged from 2.1% in Annenia to 10.7% on the Sakhalin Island.

Both conservative and surgical methods were used in the treatment of the patients with bone fractures and compression injuries. The most appropriate methods used were continuous skeletal traction and extra-focal and closed intramedullar osteosynthesis.

According to our experience, multi-organ failure (MOF) as a manifestation of "crush-syndrome" complicated treatment in 21.6% of the total cases. In the most severe cases, extracorporeal blood purification was used in 10% of the children with "crush-syndrome."Mortality in this group was 10.7%.

Therefore, the compression injuries in children caused by disasters are characterized by a high incidence of post-traumatic disabilities and high mortality rates.

Key Words: blood purification; children; crush-syndrome; disaster; multi-organ failure (MOF); treatment

Intensive Treatment Administered to Children with Crush Syndrome (CRS) after the 1995 Sakhalin Earthquake

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The earthquake in Sakhalin in May 1995 resulted in almost 3,500 deaths. Sanitary losses among children made 269 persons that died. Medical institutions in Kbabarovsk admitted 27 children within the first four days. The severity of the condition of victims who were extricated from under collapsed buildings where they had been for 8 to 48 hours was related mainly to traumatic shock, crush syndrome (CRS), and hypothermia. The main types of injury were: CRS of extremities, 17; fractures of extremities, 6; and brain injury, 4 cases. Eleven children were admitted in a traumatic shock condition and 7 children with hypothermia. All of the patients were at different stages of dehydration and hypovolemia. Acute renal failure developed in 22 of these patients.

All of the children received complex intensive therapy consisting of: anti-shock treatment; post-syndromic intensive therapy; active detoxification techniques; and surgical treatment. The complex of methods used made it possible to withdraw 25 patients from the critical condition; two of the children died.

Treatment results enable us to arrive at the following conclusions:

1) Patients suffering from CRS should undergo medical treatment only at top-quality medical institutions with mandatory attendance of resuscitators, nephrologists, traumatologists, surgeons, immunologists, and functional diagnosticians;
2) An adequate, unbiased estimate of each patient's condition is necessary at an every stage of medical treatment;
3) Intensive therapy for CRS should be complex and inclusive of infusion therapy, inotropic support, extracorporeal methods of detoxification, and syndromic therapy;
4) The best results of CRS treatment are attained using carefully selected detoxification methods based on individual clinical picture and laboratory findings; and
5) Surgical intervention may be dangerous for fear of uncontrollable fatal bleeding and should be undertaken for vital indications only.

Key Words: acute renal failure; children; crush syndrome; disaster; earthquake; hypothermia; hypovolemic shock; injuries

The Organization of Micro and Reconstructive Surgery in Conditions of War—The Chechen Experience

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The specifics of war trauma are evident. Limb salvage procedures find their utmost application in a war scene. Employment of microsurgical procedures would help