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Surgical Tactics in the Treatment of the Injured with Multiple Mechanical Trauma

Pavel G. Brusov, MD, PhD

All-Russian Center for Disaster Medicine "Zaschita", Moscow, Russia

Introduction: Multiple trauma is accompanied by a high rate of mortality among the injured, a prolonged loss of the ability to work, and a high level of disability. Often these results correspond with the lack of a unified surgical approach and a lack of treatment of the injured in non-specialized hospitals.

Objectives: To develop surgical tactics in specialized hospitals for cases of multiple trauma.

Methods: The treatment of 1,679 patients with multiple, mechanical traumas was analyzed. The severity of traumas and the condition of the injured patients were calculated by points according to the method of E.K. Gumanenko (1966).

Results: 4,457 injuries were diagnosed. Two injuries in each patient were present in 64.5% of the cases, three injuries were found in 26.0% of the cases, four injuries were found in 5.7% of the cases, and five injuries were found in 3.8% of the cases. Severe and extremely severe injuries were present in 77.0% of the cases, loss of blood of more than 1.0 L was detected in 83.0% of the cases, and shock was in present in 78.9% of the cases. The average time of delivery of the injured to the hospital was two hours. 78.0% of the injured were operated within 24 hours after admission, 8.0% within 2-3 days, and 14.0% of the cases were operated three days or longer after admission. On the average, 2.7 surgeries were performed on every patient. In 18.8% of the cases, surgeries were performed on one anatomical region. Synchronous, simultaneous surgeries were performed in 12.0% of the cases, consecutive, simultaneous surgeries during one anesthesia occurred in 32.6% of the cases, and staged surgeries with a break of time occurred in 36.5% of the cases. The mortality rate was 21.4%.

Conclusion: The treatment tactics for the injured patients with multiple trauma should include anti-shock measures that should be performed as early as possible, and emergency surgeries that eliminate a direct threat to the patient's life should be performed promptly. In addition, surgical correction of all identified injuries should be done.

Keywords: injuries; traumatic; specialized facilities; surgery; tactics; surgical; trauma

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Pre-Hospital and Initial In-Hospital Trauma Care: Evaluation of a European ModelHerman Delooz, MD, PhD, FCCM,¹M. Sabbe, MD, PhD;¹ L. Van Camp, RN, PhD;¹E. Dhondt, MD;¹ P. Vanderschot, MD;²P. Broos, MD, PhD²

1. Department of Emergency Medicine, University Hospital Gasthuisberg, Leuven, Belgium
2. Department of Traumatology, University Hospital

Gasthuisberg, Leuven, Belgium

Introduction: In emergency trauma care, as in all emergency care, the main determinant of outcome, both mortality and morbidity, is the oxygen debt accumulated during the early phase after injury (Guyton, Shoemaker). In order to limit the therapy-free interval, pre-hospital and immediate in-hospital trauma care must operate according to a protocol that determines the minimum acts and interventions to be performed, the sequence of interventions, and the team-member in charge of each of the interventions.

Purpose: To investigate the results of trauma care delivered by a trauma team performing according to a trauma protocol.

Methods: A protocol was developed through discussion and consensus of all the team-members, based on evidence from the literature, from their own data, and from previous experience. This protocol serves as an a-priori means of quality improvement, for it is carried by all of the team members. A Major Trauma Outcome Study was performed on the trauma population of this Center during a two-year period.

Results: This trauma population was similar with the most recent USA Trauma Center results as it demonstrated a matching index of 0.935. The main result is a survival rate that is significantly different from the USA data (Champion 1996), showing a greater survival of eight patients out of 1,000 major trauma victims.

Conclusion: A European model of trauma care, based on a protocol developed from evidence through consensus of all the actors involved in the trauma care (Emergency Physicians, Trauma Surgeons, Anesthetists, Radiologists, Neurologists/Neurosurgeons and Emergency Nurses) produces results that compares favorably with the USA model of Trauma Center Care.

Keywords: emergency; injury; in-hospital; outcome; oxygen debt; prehospital; protocol; quality improvement; severity scores; trauma; trauma care; trauma models

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General Session-VI
Preparedness for Disaster-I
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Chair: Karl -Axel Norberg, Nobuo Kaku

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Major Chemical Accidents in Russia (Preparedness, Cooperation)

V.N. Preobrazhensky; K.V. Lyadov

All-Russian Centre for Disaster Medicine "Zaschita", Moscow, Russia

Introduction: There has been an increase in the number of chemical accidents in Russia in the past three years. One of the largest accidents was at the plant "Dalchim-