Western European Journal of Medicine and Medical Science
Volume 1, Issue 5, January, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

INDIVIDUAL APPROACH TO THE TREATMENT OF PATIENTS WITH POLYTRAUMA

Tojiyev Muxibillo Muxamadovich
Doctor of section Emergency traumatology
Fergana branch of the Scientific center of emergency
medicine of the Republic

Annotation: Polytrauma is a generalizing concept, meaning that the patient has several traumatic injuries at the same time. Polytrauma is the simultaneous or almost simultaneous occurrence of two or more traumatic injuries, each of which requires specialized treatment.
In this article highlights of individual approach to the treatment of patients with polytrauma.

Key words: polytrauma, modern medicine, individual approach, patient, diagnostic, treatment, clinical and tactical groups, medical care.

In modern therapy and surgery of injuries, a semantic category is distinguished - polytrauma. The definition of polytrauma as a syndrome of multiple injuries with subsequent systemic reactions that can cause dysfunction of primarily intact organs and systems fully reflects the modern approach to this problem as a disease, in the treatment of which specialists of different profiles should participate. This concept is especially relevant in the early stages of traumatic illness (periods of acute reaction to injury and relative stabilization of the condition), which occur mainly at the time when these patients are in intensive care units.

The clinical and tactical approach to the treatment of patients with polytrauma remains an unsolved problem. Special difficulties arise at the intensive care stage. goal. Identification of clinical and tactical groups, a retrospective analysis of mortality in each of them. Determination of the influence of the chosen treatment tactics on this indicator.

Materials and methods. Screening, based on simpler evaluation criteria, the allocation of clinical and tactical groups of patients hospitalized in the intensive care unit. Data from clinical examination and diagnostic tests were used. The treatment tactics depended on the severity of the injury and were different in the selected groups.

Results. Based on a cumulative assessment of the nature of the injuries, delivery time, somatic and neurological status, patients were divided into groups. This made it possible to determine the approach to choosing the nature and scope of interventions at the intensive care stage.

Polytrauma is characterized by the presence of a mutual aggravation syndrome and the development of a traumatic disease, accompanied by violations of homeostasis, general and local adaptation processes. Such injuries usually require intensive care, emergency operations and intensive care measures. The diagnosis is made on the basis of clinical data, X-ray, CT, MRI, ultrasound and other studies. The list of medical procedures is determined by the type of injury. In this case, it is possible to damage both one system (for example, skeletal bones) and several systems (for example, bones and internal organs). The presence of polysystemic and

Western European Journal of Medicine and Medical Science
Volume 1, Issue 5, January, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

multiple organ lesions negatively affects the patient's condition, requires intensive medical measures, increases the likelihood of traumatic shock and death.

WHO identifies several factors contributing to the aging of the population. First of all, an increase in average life expectancy. This is facilitated by the socio-economic development of countries and the increase in income of the population. As countries develop and medical care improves, the probability of death in childhood and young age decreases significantly, and the probability of death in old age and old age increases. A significant number of elderly people maintain an active lifestyle: they go out for walks and shopping, play sports, drive cars, and the number of working pensioners is increasing. Elderly people remain able to work until old age. This is due to changes in working conditions

Classics of traumatology and orthopedics considered polytrauma mainly as a wartime problem. Nowadays, due to the mechanization of industry and the widespread use of motor transport, the number of polytrauma sustained in peaceful conditions as a result of road accidents and industrial accidents has increased dramatically. Polytrauma is usually treated by traumatologists with the participation of intensive care specialists. In addition, depending on the type and location of injuries, thoracic surgeons, abdominal surgeons, urologists, neurosurgeons and other specialists may participate in the diagnosis and treatment of polytrauma.

The most common are multiple injuries as a result of road accidents (more than 50%), the second place is occupied by industrial accidents (more than 20%), the third is falls from a height (more than 10%). Men suffer about twice as often as women. In 1-5% of the total number of polytrauma cases, the victims are children, the main reason is participation in road accidents (younger children are passengers, in older age groups, cases of collisions with child pedestrians and cyclists predominate). In children with polytrauma, injuries to the lower extremities and more common, and injuries to the abdominal cavity, chest and pelvic bones are less common than in adults.

In adults with polytrauma as a result of road accidents, limb injuries, chest injuries, abdominal injuries, pelvic fractures, ruptures of the bladder and damage to the cervical spine predominate. Abdominal, chest and traumatic brain injuries have the greatest impact on the prognosis for life. In case of accidental falls from a great height, severe traumatic brain injury is more often detected, and in case of suicide attempts, multiple injuries to the lower extremities are detected, since patients almost always jump feet first. Falls from a height are often accompanied by rupture of intra-thoracic vessels, which leads to the rapid development of hemorrhagic shock.

The distinctive features of polytrauma are:

Mutual burden syndrome and traumatic illness.

Atypical symptoms that make diagnosis difficult.

There is a high probability of developing traumatic shock and massive blood loss.

Instability of compensation mechanisms, a large number of complications and deaths.

There are 4 degrees of severity of polytrauma:

Polytrauma of the 1st degree of severity – there are minor injuries, there is no shock, the outcome is a complete restoration of the function of organs and systems.

Polytrauma of the 2nd degree of severity – there are moderate injuries, shock of the I-II degree is detected. Long-term rehabilitation is necessary to normalize the activity of organs and systems.

Western European Journal of Medicine and Medical Science
Volume 1, Issue 5, January, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

Polytrauma of the 3rd degree of severity – there are severe injuries, shock of the II-III degree is detected. As a result, partial or complete loss of functions of some organs and systems is possible.

Polytrauma of the 4th degree of severity – there are extremely severe injuries, shock of the III-IV degree is detected. The activity of organs and systems is grossly disrupted, there is a high probability of death both in the acute period and during further treatment.

Taking into account anatomical features, the following types of polytrauma are distinguished:

Multiple trauma – two or more traumatic injuries in the same anatomical area: a fractured shin and a fractured hip; multiple fractures of the ribs, etc.

Combined injury – two or more traumatic injuries of different anatomical areas: TBI and chest injury; shoulder fracture and kidney damage; collarbone fracture and blunt abdominal injury, etc.

Combined injury – traumatic injuries as a result of simultaneous exposure to various traumatic factors (thermal, mechanical, radiation, chemical, etc.): burn in combination with a hip fracture; radiation damage in combination with a spinal fracture; poisoning with toxic substances in combination with a pelvic fracture, etc.

Combined and multiple injuries may be part of a combined injury. A combined injury can occur with the simultaneous direct action of damaging factors or develop as a result of secondary damage (for example, when fire foci appear after the collapse of an industrial structure that caused a limb fracture).

Taking into account the danger of the consequences of polytrauma for the patient's life, there are:

Non–life-threatening polytrauma - injuries that do not cause gross violations of vital activity and do not pose an immediate danger to life.

Life–threatening polytrauma is damage to vital organs that can be corrected by timely surgical intervention and/or adequate intensive care.

Fatal polytrauma is damage to vital organs, the activity of which cannot be restored even by providing timely specialized care.

Taking into account the localization, polytrauma is isolated with lesions of the head, neck, chest, spine, pelvis, abdomen, lower and upper extremities.

Diagnosis and treatment for polytrauma are often a single process and are carried out simultaneously, due to the severity of the condition of the victims and the high probability of developing traumatic shock. First of all, the general condition of the patient is assessed, injuries that may be life-threatening are excluded or identified. The scope of diagnostic measures for polytrauma depends on the condition of the victim, for example, when identifying traumatic shock, vital studies are carried out, and the diagnosis of minor injuries is carried out, if possible, in the second place and only if this does not aggravate the patient's condition.

All patients with polytrauma undergo urgent blood and urine tests, as well as determine their blood type. In case of shock, the bladder is catheterized, the amount of urine excreted is monitored, blood pressure and pulse are regularly measured. Chest X-ray, limb bone X-ray, pelvic X-ray, skull X-ray, echoencephalography, diagnostic laparoscopy and other examinations may be prescribed during the examination. Patients with polytrauma are examined by a traumatologist, a neurosurgeon, a surgeon and an intensive care specialist.

At the initial stage of treatment, antishock therapy comes to the fore. In case of bone fractures, full-fledged immobilization is carried out. In case of fractures, tears and open

Western European Journal of Medicine and Medical Science
Volume 1, Issue 5, January, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

fractures with massive bleeding, a temporary stop of bleeding is performed using a tourniquet or hemostatic clamp. With hemothorax and pneumothorax, the chest cavity is drained. In case of damage to the abdominal organs, an emergency laparotomy is performed. With compression of the spinal cord and brain, as well as with intracranial hematomas, appropriate operations are performed.

If there are injuries to internal organs and fractures that are the source of massive bleeding, surgical interventions are performed simultaneously by two teams (surgeons and traumatologists, traumatologists and neurosurgeons, etc.). If there is no massive bleeding from fractures, open reposition and osteosynthesis of fractures, if necessary, are performed after patients are brought out of shock. All activities are carried out against the background of infusion therapy.

Then patients with polytrauma are hospitalized in the intensive care unit or intensive care unit, blood and blood substitutes are continued, drugs are prescribed to restore the functions of organs and systems, various therapeutic measures are carried out (bandages, drainage changes, etc.). After improving the condition of patients with polytrauma, they are transferred to a traumatology (less often – a neurosurgical or surgical department), they continue medical procedures and carry out rehabilitation measures.

The problem of treating polytrauma in patients is in the process of being studied, and a large number of studies have been conducted over the past few decades. As a result of the analysis of the collected data, it can be concluded that there are many problems that need to be solved. The main reason is high mortality in the group of patients over 65 years of age with polytrauma. At this stage of the development of medicine, an active approach to their treatment is relevant. Doctors have become more likely to make a choice in favor of surgical treatment of elderly and senile patients. Mortality in this group remains several times higher.

However, as mentioned above, in the literature we have studied there are no clear algorithms for diagnosis and treatment of patients. It follows from this that the priority direction is to study the problems of diagnosing disorders in elderly and senile people with polytrauma. Another fundamental issue is the development of an effective algorithm for surgical treatment of injuries, taking into account age-related changes, the presence of concomitant pathology and an increased risk of complications in patients of this age group.

According to WHO, polytrauma ranks third in the list of causes of death in men aged 18-40 years, second only to oncological and cardiovascular diseases. The number of deaths reaches 40%. In the early period, death usually occurs due to shock and massive acute blood loss, in the late period – due to severe brain disorders and concomitant complications, primarily thromboembolism, pneumonia and infectious processes. Disability is the outcome of polytrauma in 25-45% of cases. Prevention consists in carrying out measures aimed at preventing road, industrial and household injuries.

References:

1. Friedemann-Sanchez G., Sayer N. A., Pickett T. Provider perspectives on rehabilitation of patients with polytrauma //Archives of physical medicine and rehabilitation. – 2008. – Т. 89. – №. 1. – С. 171-178.
2. https://www.researchgate.net/publication/356411135_Traumatological_Aspect_of_Polytrauma_Treatment_for_Elderly_and_Senile_Patients

Western European Journal of Medicine and Medical Science
Volume 1, Issue 5, January, 2024
https://westerneuropeanstudies.com/index.php/3
ISSN (E): 2942-1918 Open Access| Peer Reviewed

3. Erkinovich M. B. Increase the Effectiveness of Prevention and Treatment of Osteoporosis //Central Asian Journal of Medical and Natural Science. – 2022. – Т. 3. – №. 3. – С. 811-818.
4. Scott S. G. et al. Mechanism-of-injury approach to evaluating patients with blast-related polytrauma //Journal of Osteopathic Medicine. – 2006. – Т. 106. – №. 5. – С. 265-270.
5. Erkinovich M. B. et al. IMPROVING THE EFFECTIVENESS OF FIRST AID TO PATIENTS WITH POLYTRAUMA //Western European Journal of Medicine and Medical Science. – 2023. – Т. 1. – №. 4. – С. 67-71.
6. Nauth A. et al. Polytrauma: update on basic science and clinical evidence //OTA International. – 2021. – Т. 4. – №. 1.
7. Djamolidinovna D. S. NON-CARIOUS TOOTH DAMAGE-SYMPTOMS AND TREATMENT //EPRA International Journal of Research and Development (IJRD). – 2023. – Т. 8. – №. 11. – С. 100-103.
8. Erkinovich M. B. Prevention and Modern Treatment of Fatty Embolism in Traumatological Patients //Eurasian Medical Research Periodical. – 2023. – Т. 21. – С. 158-164.