

Ministry of Health of Ukraine
Ukrainian Medical Stomatological Academy

APPROVED
at a meeting of the department
disaster medicine
and military medicine
«____» _____ 2020
protocol № 2 from 28.08.2020



Head of Department

K.V. Shepitko

**Methodical instructions
for independent work of students
during preparation for a practical (seminar) lesson
and in class**

Academic discipline	Training of reserve officers
Module № 1	Premedical help in extreme situations
Topic of the lesson	Premedical help in extreme and combat conditions. Initial examination. (CABCDE)
Course	2
Faculty	foreign students training specialty "Medicine", "Stomatology"

1. Home care in extreme and combat conditions. Initial examination. (CABCDE).

1. Relevance of the topic:

Timely pre-hospital care can save the life of an injured or wounded person, whether on the battlefield or in civilian life. According to statistics, every 45 seconds the heart stops in the world, every minute there is a mass accident with a large number of victims, every 10 minutes a shot is heard in the world. It is people who have the skills to provide home care and are the ones who will save the life of a person who is facing a problem.

2. Specific goals:

General:

- be able to assess the scene;
- Ensure your own safety;
- Assess the situation as a whole;
- Assess the condition of the victims.
- to determine the basic assessments of the condition of the victims in emergencies of man-made and natural nature and in combat conditions;
- master the skills of providing home care to victims and wounded in peacetime emergencies and in combat.
- assessment of the condition of victims in combat conditions ;.
- ensure their own safety for themselves and the victim;
- correctly assess the condition of the victim;
- properly examine the victim;
- determine the scope of assistance;
- identify the resource;
- set priorities in providing assistance to the wounded
- determine the place of evacuation in the firing zone

Competences and learning outcomes the formation of which is facilitated by the discipline (interrelation with the normative content of higher education training, formulated in terms of learning outcomes in the Standard).

According to the requirements of the standard, the discipline provides acquisition by students

competencies:

-*integral*: Ability to solve typical and complex specialized problems and practical problems in a professional health care activity, or in a learning process that involves research and / or innovation and is characterized by the complexity and uncertainty of conditions and requirements. The ability of the individual to organize an integrated humanitarian educational space, the formation of a single image of culture or a holistic picture of the world.

- *common*: Ability to apply knowledge in practical situations. Ability to exercise self-regulation, lead a healthy lifestyle, ability to adapt and act in a new situation. Ability to choose a communication strategy; ability to work in a team; interpersonal skills. Ability to abstract thinking, analysis and synthesis, the ability to

learn and be modernly trained. Definiteness and perseverance in terms of tasks and responsibilities.

-special (professional, subject): Ability to carry out medical and evacuation measures. Ability to determine the tactics of emergency medical care. Emergency care skills. Skills to perform medical manipulations.

3. Basic knowledge, skills, abilities necessary for studying the topic (interdisciplinary integration)

Names of previous disciplines	Acquired skills
Anatomy	The structure of the circulatory system, the structure of bones
Physiology	Functioning of the circulatory system
Pathophysiology	Etiopathogenesis of microcirculation disorders

4. Tasks for independent work in preparation for class and in class:

1. Means of individual medical equipment and personal safety of the serviceman.
2. Features of the assessment of the scene in combat.
3. The division of the battlefield into sectors.
4. Algorithms for providing home care in the shelling and shelter sectors.
5. Carrying out the initial inspection.
6. Review of the CABCDE algorithm.
7. Determination of the level of consciousness on the APVU scale.

4.1. The list of the basic terms, parameters, characteristics which the student should master at preparation for employment:

1. Home care	A set of simple, purposeful medical measures performed at or near the site of injury in the order of self- or mutual assistance by personnel of emergency rescue formations using regular or improvised medical means, in order to eliminate further impact of the factor, saving the lives of victims, prevention of serious complications . Save the life of the victim, eliminate the impact of the impact factor, which continues to operate, and rapid evacuation from the disaster area.
2. The main purpose of home care	-temporary cessation of external bleeding by applying a tourniquet (standard or improvised), twisting or tight bandage, finger pressure on the main vessels;
3. Basic measures of pre-medical care	-prevention or elimination of asphyxia by freeing the upper respiratory tract from mucus, blood, foreign objects; tongue fixation; -artificial ventilation of the lungs using an S-

<p>4. The amount of home care in combat</p>	<p>shaped tube, the method of "mouth to mouth", "mouth to nose", Ambu bag; -indirect heart massage, etc. shelling sector – area of direct fire with significant risk receiving a bullet or other injury. Assistance to the wounded is provided only for elimination of critical bleeding. shelter sector – a place protected from direct enemy fire by elements of natural (hills, slopes) or artificial origin (walls, houses, protective engineering structures). It is necessary to understand that the sector of shelter in the conditions of hostilities can become a sector of shelling at any moment, therefore the volume of home medical care is reduced;</p>
<p>5. Algorithm CABC:</p>	<p>C – Critical bleeding A – Airway patency B – Breathing C – Circulation</p>
<p>6. Assessment of consciousness on a scale AVPU</p>	<p>A – ALERT – fully conscious V – VOICE – responds to voice P – PAIN – responds to pain U – UNRESPONSIVE – does not react, ie completely unconscious</p>

4.2. Theoretical questions for the lesson:

1. Types of damage in combat.
2. Means of individual medical equipment and personal safety of the serviceman.
3. Features of the assessment of the scene in combat.
4. The division of the battlefield into sectors.
5. Algorithms for providing home care in the sectors of shelling and shelter.
6. Carrying out the initial inspection.
7. Review of the SAVSDE algorithm.
8. Determining the level of consciousness on the APVU scale.

4.3 Practical work (tasks) performed in class:

Each student must have the following skills, according to the questions that were considered in this practical lesson:

1. Examine the wounded according to the CABC scheme (WHEEL)
2. Determine the state of fainting on the AVPU scale
3. Carry out an extended examination of the victim "from head to toe"
4. Fill in the card of the wounded.

Topic content:

Analysis of the causes of death of soldiers during hostilities indicates that a significant part of them could be saved with timely and high-quality home care. This number ranges from 9% (Chechen campaign) to more than 25% (the war in Iraq and Afghanistan). About 90% of deaths in combat occur before the wounded are taken to a medical facility. Most injuries and wounds are incompatible with life (amputation of the head, etc.). However, some conditions, such as bleeding from a wound on the arm or leg, severe pneumothorax, and airway problems can be corrected on the battlefield. Such assistance is the difference between a soldier's death on the battlefield and his recovery in a medical facility. With proper self-help, mutual aid, and rescue skills, fatalities on the battlefield can be reduced by 15-18%.

In order for a health instructor to learn how to properly provide pre-medical extended care, he must know the main causes of death of servicemen as a result of hostilities

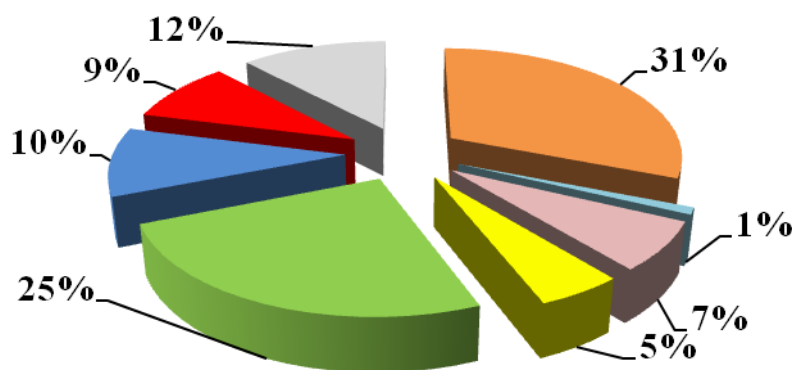


Fig. 1. The main causes of death on the battlefield

As we can see from the above, the most common cause of death on the battlefield is 31% - penetrating head injury; 25% - severe injury or trauma to the torso that cannot be treated with surgery; 10% - trauma potentially treatable with surgery; 9% - blood loss from wounds after limb detachment; 7% - severe polytrauma received as a result of the explosion; 5% - intense pneumothorax; 1% - problems with airway patency; 12% other complications and severe injuries.

About 5% of deaths occur during evacuations from the battlefield to medical facilities and are mainly related to wound infections and complications from shock.

Experts have proven that of all the potential causes of death, about 90% of them can be avoided by simply using a tourniquet for bleeding from the extremities, restoring airway patency and rapid treatment of severe pneumothorax.

About 15-27% of the wounded who die without getting to the hospital can be saved if the necessary measures are taken, namely:

- stop the bleeding,
- to restore airway patency,
- reduce the effects of pneumothorax.

In order for a serviceman to learn how to properly provide home care, he must know the means of individual medical equipment and their purpose.

Inspection of the scene, ensuring personal safety, determining the number of victims and the probable causes of their defeat. Contact with the victim.

The ambulance crew that arrived at the scene must: 1. Ретельно оглянути місце події.

2. Determine "what happened?"

3. Determine "when did this happen?"

4. Establish the number of victims and, if necessary, conduct medical sorting.

The sequence of actions of the ambulance crew at the scene:

- Checking the safety of the scene.

- Determining the number of victims, the mechanism of injury, sources of danger in the environment, etc..

4. Means of individual medical equipment.

First-aid kit medical all-military individual (AMZI)

- a set of medicines and medical devices, which is used to equip personnel and provide home care in the form of self- and mutual assistance in order to reduce the impact of weapons. (Table 2).

Table 2

Composition of a first-aid kit for medical all-military individual for equipping servicemen of the Armed Forces of Ukraine

№ п/п	Name	Number
1.	Means for a stop of bleeding mechanical	1 unit
2.	Chemical is a means to stop bleeding	1 unit
3.	Multifunctional dressing package (or individual sterile first aid dressing with rubberized shell - for the transition period)	1 unit
4.	Analgesic in a syringe tube (or auto-injector)	1 unit
5.	Nasopharyngeal airway	1 unit
6.	Antibacterial agent in tablets containing amoxicillin with clavulanic acid	1 unit
7.	Mechanical tool for cutting clothes and shoes	1 unit
8.	Medical examination gloves	1 unit
9.	Blue marker	1 unit
10.	The plaster is reinforced	1 unit
11.	Occlusive self-adhesive film	1 unit
12.	Case or bag (with belt or belt)	1 unit

Means for stopping bleeding mechanical (Fig. 2). A tourniquet is a means to stop



bleeding, which is a part of AMZI.a)



b)

Fig. 2 Plaits: a) special harness (type SAT);

b) harness made of elastic rubber (Esmarch type)

- If there is critical bleeding from the limb, a tourniquet should be applied to the limb above the bleeding site and tightened by twisting until the bleeding stops. Use a special harness (type SAT), a harness made of elastic rubber (Esmarch type) or a twist harness (turnstile) of improvised material. The time of application of the tourniquet should be marked with a permanent marker on visible areas of the face. Denoted as follows: "T 18.15", where T is a turnstile (harness), 18.15 - time in the format of 24 hours. Or attach a note to the harness indicating the exact time of application. The tourniquet should be on the limb without admission for no more than 1.5-2 hours, with admission on demand every 30-40 minutes for no longer than 5-6 hours, but it is recommended within the first half hour to replace it with a tamponade and pressure bandage (except for amputations). If the tourniquet is on the limb for a long time, you need to take into account the effects of post-tourniquet syndrome in further work with the victim.
- If the harness is applied correctly, then:
 - - bleeding from the wound stops,
 - - the limb becomes pale and cold,
 - - pulse below the tourniquet is not determined.

First-aid kit medical all-military individual (AMZI) – a set of medicines and medical devices, which is used to equip personnel and provide home care in the form of self- and mutual assistance in order to reduce the impact of weapons. (Table 2).

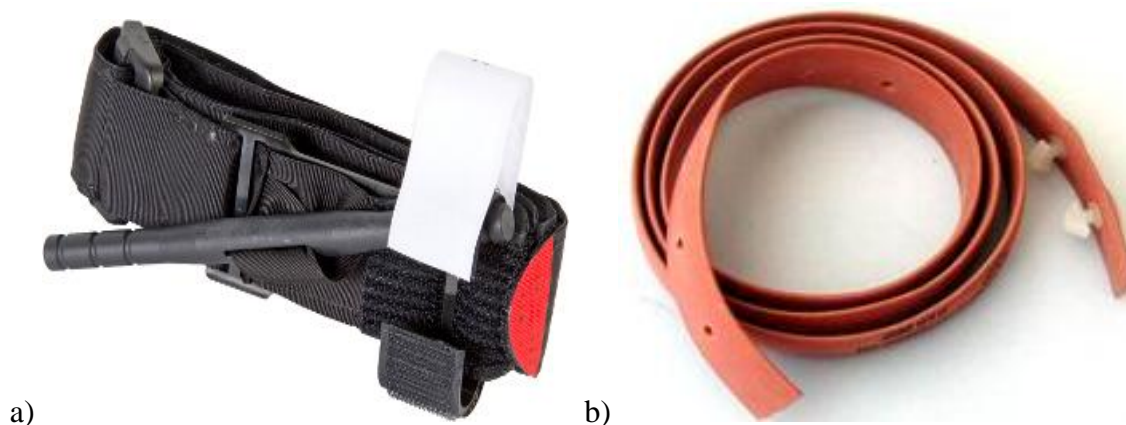
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4.2. Means for stopping bleeding mechanical (Fig. 2). A tourniquet is a means to stop bleeding, which is part of AMZI.



**Fig. 3 Harnesses: a) special harness (type SAT);
b) harness made of elastic rubber (Esmarch type)**

If there is critical bleeding from the limb, a tourniquet should be applied to the limb above the bleeding site and tightened by twisting until the bleeding stops. Use a special harness (type SAT), a harness made of elastic rubber (Esmarch type) or a twist harness (turnstile) of improvised material. The time of application of the tourniquet should be marked with a permanent marker on visible areas of the face. Denoted as follows: "T 18.15", where T is a turnstile (harness), 18.15 - time in the format of 24 hours. Or attach a note to the harness indicating the exact time of application. The tourniquet should be on the limb without admission for no more than 1.5-2 hours, with admission on demand every 30-40 minutes for no longer than 5-6 hours, but it is recommended within the first half hour to replace it with a tamponade and pressure bandage (except for amputations). If the tourniquet is on the limb for a long time, you need to take into account the effects of post-tourniquet syndrome in further work with the victim.

If the harness is applied correctly, then:

- bleeding from the wound stops,
- the limb becomes pale and cold,
- pulse below the tourniquet is not determined.

REMEMBER!

Although the harness is part of the AMZI, it must be stored in a designated area for the unit. For example in the left breast pocket.

WARNING! *It is impossible to keep a plait like Esmarch wound on the*

example of a machine gun !!!

Chemical is a means to stop bleeding. For emergency cessation of external bleeding (arterial, venous, capillary), modern contact hemostatics have been developed and successfully used - hemostasis, which when in contact with the flowing blood, as a result of a chemical or physical reaction, form a pseud clot, which allows you to stop bleeding.

According to world statistics (from World War II to all military conflicts today), the main cause of death of the wounded on the battlefield and in any other emergency is death from bleeding - up to 90% of the total number of wounded. At the same time bleeding at damage of the main arteries is so critical that the wounded usually dies before rendering any home medical care.

There are two main groups of contact hemostatics (Fig. 3) - based on chitosan (Celox (Celox), ChitoGauze (ChitoGause)) and based on koalin (QUIKCLOT (QuickClot)).



Fig. 4 Hemostatics: a) Celox (Celox); b) ChitoGauze (ChitoGause); c) QUIKCLOT (QuickClot)

Chitosan – a natural polysaccharide extracted from repeatedly cleaned shrimp shells caught in the waters of the Arctic Ocean. The mechanism of action is due to the fact that chitosan on an electric charge is positive and attracts negatively charged erythrocytes and platelets, resulting in the formation of a clot-thrombus.

The advantages of contact hemostatics based on Chitosan include the following features:

- efficiency does not decrease at low temperature;
- its effectiveness does not depend on impaired coagulation factors (hemophilia, coagulopathy);

The presence of chitosan in the wound provides the effect of bonding of damaged soft tissues and prevents the resumption of bleeding during transportation.

Celox products are one of the leaders in sales of contact hemostatics in various forms (granules, bandages, applicators).

The unique features of this product, in addition to the standard advantages of hemostats with chitosan, include proven antibacterial activity against 26 species of Gram-positive and Gram-negative bacteria. This feature of the product reduces the risk of wound infection and provides faster healing without the massive use of antibiotics.

The second group of contact hemostatics are products using kaolin - white clay, also known as "white clay", consisting of the mineral kaolinite. Formed by the destruction (weathering) of granites, gneisses and other rocks containing feldspars. Upon contact with the blood in the bleeding zone, kaolin (due to the porous structure of the mineral) absorbs water molecules from the blood - the effect of hemoconcentration. This leads to the rapid formation of a blood clot due to a local increase in the concentration of coagulation factors directly in the area of contact of kaolin with the flowing blood.

The main disadvantage of contact hemostatics of the 2nd generation was a local sharp rise in temperature. Third-generation contact hemostatics based on kaolin do not change the temperature, ie do not cause heating at the site of application. The advantages of hemostas of this type include hypoallergenicity, due to the fact that in the contact zone there is a physical reaction-absorption.

Chemicals (contact hemostatics, hemostas) are available in three different forms - granules, applicators and bandages. Powder or granules are poured into the wound. Hemostop applicators allow the active substance to be injected into narrow deep wound passages. Bandages impregnated with chitosan or kaolin are convenient for tamponade of the wound and are easily removed later.

Currently, conventional rolled bandages with hemostas are replaced by Z-fold (z-fold) bandage, ie the bandage is folded with an accordion, the packaging of which has a flat shape, more convenient for storage and application to the wound.

Hemostatic agents in the form of powders are practically not used in the field. Use bandages or applicators.

The effectiveness of the integrated use of hemostatic powders is almost impossible to ensure in the field, as in this situation it is necessary to use three tools in a row: tourniquet + hemostatic + bandage. Hemostatic alone does not replace all of the above!

The use of contact hemostatics has dramatically changed the mortality statistics for massive bleeding. Especially with bleeding in places where it is impossible to use a tourniquet (buttocks, armpits, neck).

With the help of bandages Celox, ChitoGauze or QuikClot arterial bleeding stops for about 120 seconds, so it is rational to recommend this bandage for immediate assistance to yourself and, if necessary, the wounded.

Multifunctional dressing package (BPT).

Individual dressing package (PPI)– it is a specially made and rationally placed dressing material, which is contained in a sealed rubberized shell. In addition to the rubberized (outer) shell, the package has an inner paper. It consists of a bandage (10 cm x 7 m), two cotton gauze pads (32 x 17 cm), one of which can move on the bandage, and a safety pin. The inner surface of the rubberized shell, bandage, sterile pads. The shells protect the contents of the package from mechanical damage, moisture and contamination (Fig. 4).

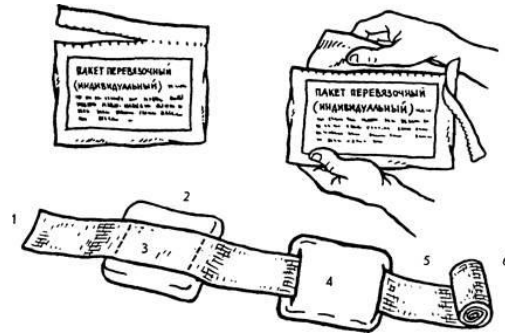


Fig. 5. Individual dressing package

Disadvantages in the use of PPI:

cannot create a full-fledged pressure bandage effect;

easily untwisted;

when wet (blood), turns into a tourniquet.

Multifunctional dressing bandage (Israeli bandage), The emergency bandage (hemorrhage control compression bandage) is the most popular tool, combines the functionality of a pressure bandage and a tourniquet (Fig. 5).

It consists of one or two absorbent pads (the first - absorbs, the second - repels blood and this allows blood to spread over the entire surface of the pillow), the pressing element, the actual elastic bandage and the fixing element.



Fig. 6. Israeli compression bandage

This sterile non-stick bandage has a structure that allows you to remove it without opening the wound;

A pressure applicator or pressure splint that is located above the wound in order to stop the bleeding with pressure (about 30 kg) if necessary. It also allows you to wind the bandage in different directions. This feature is very useful for bleeding in the groin or head injury.

The clamp on the end of the bandage can be applied with a slight smooth movement of the hand. The compression bandage is sterile, non-sticky, with a lining that can compress any area, is easy to wind and secure, and has an additional tourniquet-like fixator that is used to further restrict the wound's blood supply.

Today instead of him in AMZI - PPI

Analgesic in a syringe-tube (or auto-injector) (Fig. 6).

Nalbuphine hydrochloride 1 ml. Refers to narcotic analgesics.

Indications: pain of strong (medium) intensity of various origins.

Contraindications: hypersensitivity to nalbuphine hydrochloride or any of the ingredients. The drug should not be used for respiratory depression, increased

intracranial pressure, head injury, acute alcohol intoxication, alcohol psychosis, obvious liver and kidney dysfunction.

Method of administration and dosage: the drug is prescribed for intravenous and intramuscular administration.

Usually 1 ml of solution is administered intravenously or intramuscularly for pain. A single dose of the drug is administered if necessary every 4-6 hours.

A specific antidote is naloxone hydrochloride.

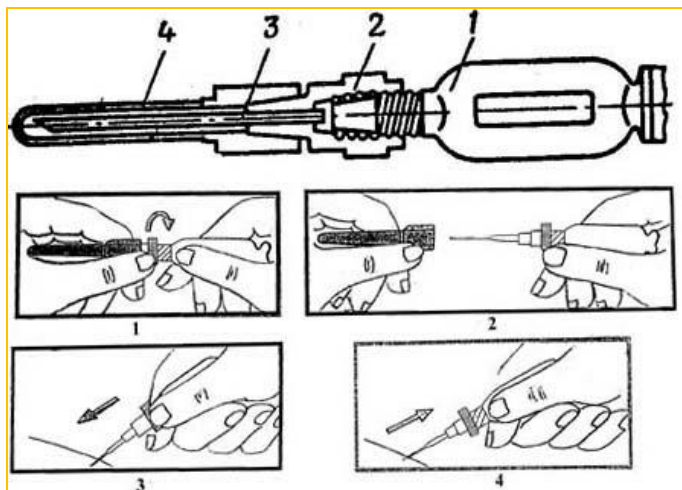


Fig. 7. Analgesic (in a syringe-tube)

Nasopharyngeal airway. The muscles of the tongue of the wounded person, who is unconscious, can relax, causing the root of his tongue to block the airways, as it sinks inside and blocks the lumen of the trachea (airway).

To prevent this condition in the first aid kit provides the presence of a nasopharyngeal airway (Fig. 7). The size of the air duct is selected in advance for the owner of the first aid kit, stored in the first aid kit and used if necessary to the owner of the first aid kit. To facilitate the introduction of the airway may be present in the first aid kits lubricant in unidosis.



Fig. 8. Nasopharyngeal airway

Antibacterial agent in tablets containing amoxicillin with clavulanic acid.

Mechanical tool for cutting clothes and shoes. These can be scissors, a special knife for cutting clothes and slings, and so on.

Medical examination gloves. Each AMZI is equipped with disposable gloves. They must be used when working with the wounded for their own safety. It is recommended to use nitrile gloves instead of latex gloves, for better protection and blue or purple colors for clarity of blood during the examination of the wounded to find wounds on the body. You should refrain from wearing black gloves.

The marker is permanent used to indicate on the visible part of the face: the time of application of the tourniquet (tourniquet), the introduction of narcotic analgesics and to fill out MIST REPORT.

The adhesive tape is reinforced used to fix the wounded on a stretcher, fix the injured limb to a healthy one, fix the improvised transport immobilization of the limb; in the absence of an occlusive dressing to seal the chest wound in order to prevent the development of open pneumothorax, etc..

Occlusal self-adhesive film – means for providing home care for penetrating chest injuries. Used to prevent complications of open pneumothorax. Divided into those that are a film with an applied adhesive layer and those that also have a valve.

Film occlusive dressings.

H&H Wound Seal Kit (H&H Wound Seal Kit) is a compact and budget-friendly tool for home care for penetrating chest injuries. Represents an adhesive film applied to the chest wound for sealing.

Halo Chest Seal is a bandage with an extremely sticky base that sticks to the chest, even if it is completely filled with water, blood or other fluid. The Halo Chest Seal kit includes 2 occlusive dressings (Fig. 8) for home care in open pneumothorax (for application to the entrance and exit wound opening).

The HyFin Chest Seal is available in an airtight package, includes a gauze napkin to remove blood and other fluid from the surface of the chest, and an adhesive-based patch, with a large convenient bright red well-marked edge to open the floor. 'languages.



**Fig. 9. Occlusal self-adhesive film Halo Chest Seal
*Valve occlusive dressings.***

The Bolin Chest Seal occlusive dressing differs from other products by the presence of a triple one-way valve, which allows you to effectively remove excess air that has accumulated in the pleural cavity. The extremely sticky base allows you to apply the bandage even on a wet surface, as well as on skin with thick hair. The Bolin Chest Seal kit (Fig. 9) includes a hygroscopic wipe that easily removes excess moisture / blood from the surface of the chest before applying an occlusive dressing.

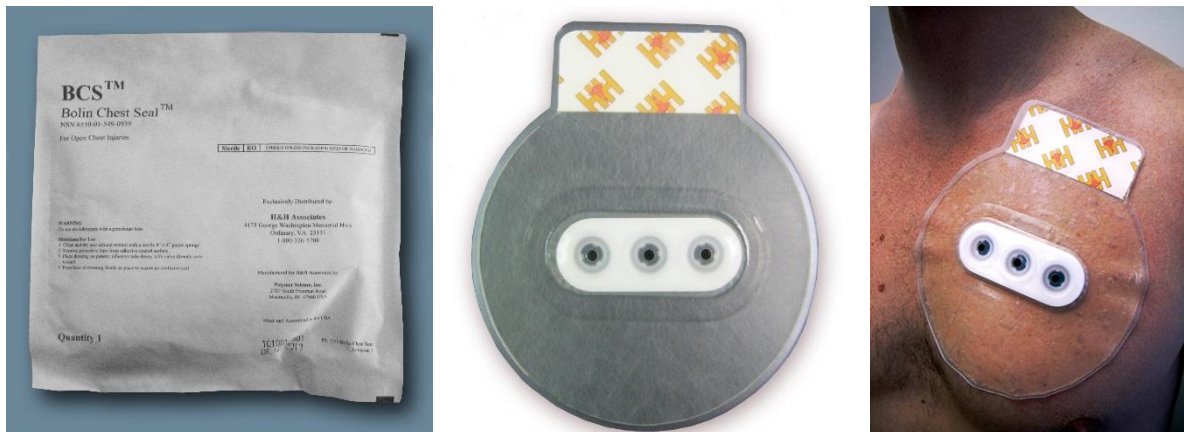


Fig. 10. Bolin Chest Seal

To apply an occlusive dressing, it is necessary to release it from the protective layer and apply it with a sticky side on the skin. The occlusive dressing valves should be located directly above the wound to effectively remove excess air.

The Asherman Chest Seal occlusive dressing is an adhesive-based patch with a one-way valve and a gauze napkin (Fig. 10). The round shape of the bandage, which reaches 14 cm in diameter, allows you to localize wounds of various sizes, and thanks to the stable adhesive base, Asherman Chest Seal is easily applied not only on the exposed skin, but also on areas with thick hair. The transparent area in Asherman's occlusive dressing allows you to control the correctness of the application of the patch, which in combination with a gauze napkin makes this tool most effective



Fig. 11. Asherman Chest Seal occlusive dressing

Group means of medical equipment

To provide home health care to the wounded of the unit, a medical backpack (NM) was equipped.

Medical shoulder bag - a set of medicines and medical devices, which is formed to equip the sanitary instructor of the company (battery) in order to provide home care to 30 victims in mutual assistance, table. 3.

Table 3

The composition of the backpack of a medical health instructor

Name	Unit	Number
MEDICINES		
Analgesic in a syringe tube or autoinjector (nalbuphine hydrochloride 1 ml)	pcs	20
Diclofenac 0.05 + Paracetamol 0.5 №10, tablets	pcs	3
Ketorolac 3% 1 ml	pcs	8
Activated charcoal tablets 0.25 №10	pcs	2

Loratadine 0.01 №10, tablets	pcs	1
Sodium chloride 0.9% - 250 ml, solution for infusion in polyvinyl chloride containers	pcs	6
Gecodes 250 ml	pcs	5
Hemotran solution for injection, 100 mg / ml 5 ml	pcs	10
Lubricant	pcs	1
Sulfacetamide 20% solution, eye drops	pcs	1
Lidocaine 2% solution, eye drops	pcs	1
Spray for burns	pcs	1
ANTIBIOTICS		
Amoxicillin 500 mg, to-and clavulanic 125 mg table. №14 tablets	pcs	1
Ciprofloxacin 0.5 №10, tablets	pcs	1
DISINFECTANTS		
Antiseptic and disinfectant for hand treatment	liter	0,1
BINDERS, ADHESIVES		
Multifunctional bandage 4 "	pcs	5
Multifunctional bandage 6 "	pcs	5
Multifunctional bandage 12 "	pcs	2
or an individual sterile first aid bandage with a rubber sheath	pcs	
Means for a stop of bleeding chemical (on a fabric basis)	pcs	3
Occlusal self-adhesive film	pcs	8
Sterile gauze bandage 5 m long and 10 cm wide	pcs	5
Sterile gauze bandage 7 m long and 14 cm wide	pcs	5
The medical bandage was sterile	pcs	2
Medical scarf (dressing)	pcs	2
Hydrogel bandage for limbs and neck 1 m long and 5 cm wide	pcs	1
Hydrogel bandage for limbs 10 cm long and 10 cm wide	pcs	1
Hydrogel face bandage 45 cm long and 20 cm wide	pcs	1
The hydrogel bandage is unified, 20 cm long and 20 cm wide	pcs	1
The adhesive tape is reinforced	pcs	1
Medical plaster on a fabric basis of 1,5 cm x 3 m	pcs	2
MEDICAL ITEMS ARE COSTABLE		
Inspection gloves are non-sterile	couple	50
Pins are safe	pcs	10
Device for transfusion of single-use infusion solutions PR	pcs	10
Napkins alcohol №100	pcs	1
MEDICAL ITEMS, APPARATUS AND SURGICAL INSTRUMENTS		
Decompression needle	pcs	6
Intravenous cannula with G18 injection valve	pcs	15
Means for a stop of bleeding mechanical	pcs	8
Collar Chance	pcs	1
SAM bus	pcs	2
Kendrick's tire	pcs	1
Medical thermometer	pcs	1
Heater rubber №2 (chemical heater for cooling and heating)	pcs	1
Pulse oximeter	pcs	1
Eyepiece flashlight	pcs	1
Disposable syringe 2 ml, with a needle	pcs	10
Disposable syringe 5 ml, with a needle	pcs	10
Medical cape (thermal cover)	pcs	6

The stretcher is soft	pcs	2
APPARATUS AND DEVICES FOR GENERAL ANESTHESIA AND INTENSIVE THERAPY		
Oral air J-shaped plastic	pcs	1
Nasopharyngeal airway 32FR	pcs	1
Nasopharyngeal airway 28FR	pcs	2
Nasopharyngeal airway 26FR	pcs	2
Nasopharyngeal airway 24FR	pcs	1
SANITARY AND ECONOMIC PROPERTY INVENTORY		
Scissors for cutting clothes	pcs	1
Blue marker	pcs	1
Flashlight on rechargeable batteries (with replaceable glasses of blue, yellow and red color)	pcs	1
CONTAINER		
Medical shoulder bag	pcs.	1

5.2. Medicines, antibiotics and disinfectants

Diclofenac. Analgesic and anti-inflammatory agent.

Indications: pain from traumatic injuries of the musculoskeletal system and soft tissues.

Contraindications: gastric and duodenal ulcers in the acute phase, liver and kidney disease, hypersensitivity to the drug and other non-steroidal anti-inflammatory drugs, bronchial asthma, urticaria, acute rhinitis and other allergic reactions associated with non-steroidal administration. anti-inflammatory drugs.

Method of application and dosage. *See Algorithm "Providing home care for pain".*

Paracetamol. Analgesic and anti-inflammatory agent.

Indications: pain syndrome of mild and moderate intensity: headache, migraine, toothache, neuralgia, muscle pain, pain from injuries, burns.

Contraindications: hypersensitivity to the drug; severe liver and / or kidney dysfunction.

Method of application and dosage. *See Algorithm "Providing home care for pain".*

Paracetamol should be washed down with plenty of fluids.

Ketorolac. Analgesic.

Indications: pain of medium and severe intensity: injuries, toothache, muscle pain, joint pain, neuralgia, radiculitis, dislocations, sprains, rheumatic diseases.

Contraindications: individual hypersensitivity to ketorolac and other nonsteroidal anti-inflammatory drugs, asthma caused by acetylsalicylic acid, decreased blood pressure, gastrointestinal lesions in the acute stage, hypocoagulation (including hemophilia), renal failure or high risk of stroke, stroke, hematopoietic disorders.

Method of application and dosage. *See Algorithm "Providing home care for pain".* The maximum daily dose is 120 mg.

Activated carbon. Remedy for poisoning.

Indications: intoxication and poisoning.

Contraindications: in lesions of the gastrointestinal tract in the acute stage, gastric bleeding.

Method of application and dosage. At poisonings and intoxications to adults appoint internally in a dose of 20 - 30 g on reception in the form of aqueous suspension in 0,5-2 glasses of water.

Loratadine. Antiallergic agent.

Indications: allergic rhinitis, allergic conjunctivitis, acute urticaria, Quincke's edema, allergic reactions to insect bites, itchy dermatoses.

Contraindications: hypersensitivity to loratadine. Do not prescribe to newborns.

Method of application and dosage. 1 tablet (10 mg) once a day.

Sodium chloride 0.9%solution for infusion.

Indications: dehydration; replenishment of fluid and electrolyte losses during bleeding; as a solvent. Can be used topically to wash wounds, eyes, nasal mucosa.

Sodium chloride solution of 0.9% normalizes the water-salt balance. Quickly excreted from the vascular system. The drug is retained in the vascular bed for a short time and very quickly passes into the intercellular and cellular space. After 1 hour, only about half of the injected solution remains in the vessels.

Contraindications: incompatibility of the main drug and sodium chloride solution.

Method of application and dosage. Used intravenously, intramuscularly.

Gecodes. Colloidal solution of hydroxyethylated starch for infusions.

Indications: prevention and treatment of insufficient plasma volume (hypovolemia) and shock, trauma, burns.

Due to its ability to bind and retain water, the drug increases the volume of circulating blood by 85-100% of the administered volume for 4-6 hours after infusion.

Contraindications: hypersensitivity to the drug, traumatic brain injury with increased intracranial pressure, severe heart failure, renal failure.

Method of application and dosage. The drug is intended for intravenous infusion. The first 10-20 ml should be administered slowly, monitoring the patient's condition due to the possibility of anaphylactoid reactions. The dose, rate and duration of administration are set depending on the severity of blood loss and hypovolemia.

Interaction with other medicinal products. Not compatible with tranexamic acid.

The recommended daily dose for adults to compensate for circulating blood volume is usually 250-1,000 ml.

Sulfacetamide 20% solution, eye drops, antibacterial agent for topical use.

Indications: eye injuries, purulent corneal ulcers, conjunctivitis, blepharitis, prevention of blenorrhea

Apply 2-3 drops in the lower conjunctival sac of each eye 5-6 times / day.

Amoxicillin hydrochloride, enhanced with clavulanic acid.

Antibacterial agent.

Indications: prevention of wound infection, infectious and inflammatory diseases caused by drug-sensitive microorganisms: otitis, sinusitis, sore throat, tonsillitis, pneumonia, pyelonephritis, cystitis, etc.

Contraindications: hypersensitivity to amoxicillin, clavulanic acid or other components of the drug, hypersensitivity to antibiotics of the penicillin group in the history, jaundice or hepatitis caused by antibiotics of the penicillin group in the history.

Method of application and dosage. The usual daily dose is one tablet (250 mg / 125 mg) every 8 hours or one tablet (500 mg / 125 mg) 2-3 times a day, depending on the severity of the infection. The course of treatment is usually 5-7 days.

Ciprofloxacin. Antibacterial agent.

Indications: prevention of wound infection, infectious and inflammatory diseases caused by drug-sensitive microorganisms: infections of the respiratory tract, urinary tract, ENT organs, skin and soft tissues, bones and joints, abdominal organs, gonorrhea, etc.

Contraindications: hypersensitivity to ciprofloxacin, drug ingredients and other fluoroquinolones.

Dosing and administration. Inside (without chewing and drinking enough fluids) on an empty stomach. At uncomplicated infections appoint 250 mg (0.5 tablets), at complicated infections - 500-750 mg (1-1.5 tablets) 2 times a day.

Dressings

The multifunctional dressing bandage was described in paragraph 2.2.3.

It should be noted that the RT has multifunctional dressings 4 см wide - for application to the forearm and shin 5 pcs., 6 см width - for the shoulder and thigh 5 pcs., 12 см width - for applying a bandage to the chest and stomach 2 pcs. (Fig. 11).



Fig. 12. Multifunctional dressing bandage on the chest and abdomen

The sterile bandage is small consists of a bandage 14 cm wide and 7 m long and one cotton gauze pad measuring 56 by 29 cm, sewn to the end of the bandage.

The sterile bandage is large has a cushion measuring 65 by 45 cm, to which six fixing straps are sewn. Bandages are used for large wounds and burns.

Medical bandage scarf is a triangle-shaped fabric with a side of 50 cm x 50 cm. It can be used as a bandage and for temporary immobilization.

Hydrogel-based dressings (AQUA-GEL, BURNSHIELD Hydrogel, WATER-JEL Burn dress) used to help with burns, sunburns and minor injuries. It has a cooling, analgesic and antiseptic effect. Does not stick to the wound surface (Fig. 12).

It can be available as a spray, gel in unidoses, bandages of different sizes. Apply as soon as possible on the baked surface. The size is selected so as to cover the entire area of the burn. Secure with a bandage, adhesive bandage or bandage. You can leave this bandage on for a day or more.



Carrying out the initial inspection. Review of the CABC algorithm (WHEEL)

The sanitary instructor should examine the victim za **algorithm CABC**:

C – Critical bleeding

Quickly checks the wounded for life-threatening bleeding (severe arterial bleeding) from wounds on the extremities. For example, if a fighter's limb was torn off, or the sleeve of his shirt, or his pants may be red with blood. If severe bleeding is detected, you need:

quickly apply a tourniquet as high as possible over the wound on top of the form and tighten it to stop the bleeding;

hand or knee (if injured in the leg - it is desirable knee) to press on the point of compression of the arteries on the injured limb;

if there is obvious bleeding from the wound, use direct pressure on the wound with your hand and pressure on the wound opening with a bandage (gauze swab, etc.).

NOTE: Minor cuts and wounds that show no signs of bleeding are bandaged after the initial examination.

During the examination, if possible, talk to the wounded. Encourage and calm down. Explain what help is provided to him. If the wounded person is talking, there is no need to check the airway patency.

A – Airway

If the wounded person is unconscious, lying on his back and has no obvious signs of breathing, or breathing is disturbed, the health instructor should examine the oral cavity for the presence of foreign bodies, vomit, etc. If they are, by twisting a gauze bandage, turning the head of the wounded sideways (to himself), he cleans the mouth.

Then perform a triple Safar by extending the head, pushing the lower jaw forward and opening the mouth. To do this, he places one hand on the victim's forehead and tilts his head back completely, while with the other hand he raises his chin, extends his lower jaw and opens his mouth.

For 10-20 seconds checks the presence of breathing technique: hear, see, feel.

Identifies the symptoms of airway obstruction: shortness of breath and increasing cyanosis of the face.

If the victim is conscious or unconscious, the health instructor should insert a nasopharyngeal airway from the victim's first aid kit.

If vomiting is observed, the unconscious victim should be placed in a safe position on the abdomen and examined in this position, or the victim should be allowed to take any position that best protects the airways, including a sitting position.

B – Breathing

Next, the health instructor checks the nature of breathing:

1. Identifies symptoms that may indicate respiratory disorders: rapid or slowed respiration, excessive sweating, increasing cyanosis of the face, fainting.
2. Determines BH (rate of 16-18 breaths per 1 min).
3. Evaluates the way of breathing, depth of breaths and passivity of exhalation, checks whether the movements of the chest are symmetrical.
4. Pays attention to the signs of pneumothorax, according to the algorithm of needle decompression of the chest with intense pneumothorax. In the presence of signs of pneumothorax, provides premedical advanced care according to algorithms.

C – Circulation

Next, the sanitary instructor determines the presence of a pulse in the radial and carotid arteries. Then perform a capillary test - pressing on the nail plate. At the same time, it pales and normally turns pink again in 2 seconds.

Evaluates the color of mucous membranes and skin on exposed parts (nasolabial triangle): blue, pink, pale or marble. A change in color may indicate invisible (missed) bleeding.

Evaluates the temperature of the extremities: cold or warm. And draws attention to other symptoms that would indicate changes in the circulatory system, such as impaired consciousness.

After that, the sanitary instructor examines the victim for other injuries (hematomas, bone deformities, crunch when pressed).

Examination of the head.

To do this, the sanitary instructor removes the helmet of the wounded, straightens his head. In this case, the wounded man is lying on his back. Determines

the presence of wounds and local hemorrhages on the head and detects hidden injuries:

at the same time he feels the integrity of the skull bones with his hands and examines the face with open fingers, putting his fingers under the nape of the neck, constantly monitoring the cleanliness of gloves (blood, fluid). He then examines the bones of the forehead, eye sockets, base of the nose, upper jaw, lower jaw for damage, bruises behind the ears and around the eyes (raccoon eyes).

looks into the ears to detect blood, yellowish or pink fluid (CSF). This is a sign of a fracture of the skull base and a very severe head injury.

***NOTE:** if a fracture of the skull base is suspected, it is forbidden to place the nasopharyngeal tube.*

opening the eyelids with his fingers, examines the integrity of the eyes and the presence of hemorrhages, examines the pupils - their symmetry. If one pupil is wide and the other is narrow, this is a sign of a severe head injury.

Examination of the neck.

The health instructor examines the integrity of the neck and superficial veins of the neck. It determines the presence of wounds and local hemorrhages, detects hidden damage:

feels the neck, wrapping his fingers behind his neck, in the collar area, starting from the seventh vertebra (protruding), gradually rising to the base of the skull. At the same time, there should be no asymmetrical protrusions, tension or sagging muscles on one side of the neck.

with his fingers under his neck, he must constantly monitor the cleanliness of gloves (blood, fluid).

in the case of tension (swelling) of the superficial veins of the neck, chest injuries and intense pneumothorax may be suspected.

if the examination reveals cyanosis or pallor of the skin of the neck, and under the skin on one side there may be swelling (emphysema), when pressed, you can hear a sound similar to the squeak of snow. These are signs of chest injury and severe pneumothorax.

if the thyroid cartilage (cricoid) and trachea lying below are displaced away from the axis of the neck, chest injuries and intense pneumothorax should be suspected.

Examination of the torso (chest, abdomen, back, pelvis).

Examination of the chest for bone fractures

. If the victim is conscious and during the examination of the chest by a sanitary instructor found damage, the victim will strain the sick side. If unconscious, there will be no natural elasticity of the skeleton. In the presence of fractures under the arms, the sanitary instructor will feel unnatural pushing of bones, crunch, pain in the victim, who is conscious. There may also be swelling (emphysema) under the skin on the fracture side (wound). It then detects hidden damage:

before the examination, the bulletproof vest should be removed from the victim and the outer clothing should be opened (cut). Clothing should be carefully inspected for blood stains and bullet holes. Through underwear to press on shoulders (on shoulder straps). If there is no damage to the shoulder girdle, proceed: Press the clothes over the shoulders from above and spread them.

consistently, symmetrically on both sides from the axillary areas down, palms tightly feel the chest and examine the front, the edge of one palm, pressing on the sternum.

Examination of the torso (abdomen, back, pelvis) for the presence of wounds and hidden injuries.

Examination of the abdomen. The health instructor should unbuckle the belt on his pants and open his stomach. Conditionally divide the abdomen into four symmetrical sections. Consecutively, placing one hand on the finger of the other hand to feel each square. The abdomen should be symmetrically soft. If there is tension in the abdominal muscles, it is a sign of injury to the abdominal organs.

Examination of the pelvic bones. Through clothing, the health instructor should press on the sides of the iliac bones. If there is no unnatural pushing of the bones, crunch, pain in the wounded, who is conscious, continue the action: Through clothing, press on the wings of the pelvic bones from above, trying to dilute them. With a fracture of the pelvic bones, the complication is bleeding from 2 to 4 liters of blood.

Examination of the perineum and inguinal folds. Wrapping his hands under his underwear, fingers spread, consistently, symmetrically on both sides to the groin, down, the sanitary instructor should feel the body, finding wound holes, blood, fluid. Examine the perineum.

After turning the wounded man to the side and putting his hands under his underwear, fingers apart, the sanitary instructor should examine the back, waist, buttocks, crotch on the wound openings, fractures, the integrity of the spine, blood, fluid.

If during the examination of the chest (the wounded man is still lying on his back) was found an injury - a bullet hole, a fragment, etc., the sequence of examination changes

The wounded man is then turned on his back and the pelvic and perineal bones are examined.

Examination of legs and arms.

The health instructor should check the effectiveness of the previously applied tourniquets.

Examination of the extremities. Without removing clothing (can be cut), wrapping his hands under the limb, fingers spread, sequentially, symmetrically on both sides, embracing the limb, the health instructor examines the limb to detect unnatural joint mobility or limb mobility outside the joint, and wound openings, or abnormal openings, or .

Accordingly, from the groin to the foot with your fingers and palms, you should feel the foot closer to the health instructor. Take off your shoes and inspect your feet. In winter, it is not desirable to remove shoes due to hypothermia. If there is no suspicion of a foot injury, the shoes should be carefully inspected. Then the other leg.

Wrapping your fingers under the limb, you need to constantly monitor the cleanliness of gloves (blood, fluid).

In the same way the sanitary instructor examines the hands of the victim. First far from yourself, then - near.

End of review.

Upon completion, the sanitary instructor fixes fractures and cervical spine, preparing to transport the victim to a safe area.

Makes a note on the tourniquet (clothing or face of the wounded) about the time of application of the tourniquet.

All unconscious wounded in which breathing is present, after providing home care in a safe place, is transferred to the so-called "stable position" on the abdomen (on the side), in order to reduce the risk of airway obstruction due to tongue or vomiting.

The victim is in a stable position until the moment of transportation to the medical institution.

Upon completion of the examination, the health instructor records the conclusions of the examination, indicates the amount of care provided and changes in the condition of the wounded in the information medical card and transfer with the wounded to the next level of care.

Algorithm for providing home care in the shelling and shelter sectors.

Assistance in the shooting sector.

This is the assistance provided at the site of the wound when the paramedic or paramedic is near the wounded under enemy fire. The risk of additional damage from enemy fire at any time is extremely high for both the victim and the health instructor.

Extended medical assistance in the shelling sector is provided only by order of the commander, as the main priority in combat is to perform a combat mission. In some cases, when the tactical situation allows, decisions are made independently.

First of all, after seeing a soldier's injuries, it is necessary to establish voice contact with him, determine the location of the wound, the ability to apply the tourniquet and move to the shelter sector. If the wounded are able to do it on their own, there is no need to risk the life of another fighter.

When approaching the wounded, you should try to get as much visual information about him and the scene: whether it happened in front of your eyes, in what position it is, what visible damage, foreign objects in the body, whether there are puddles of blood, where his personal weapon, or you in addition, nothing is threatened (hidden under the body of a grenade with a removed check, etc.).

Signs of the life of the wounded in the shelling sector are determined only by an oral address to him: "Are you wounded? Do you need help?" Lack of response is interpreted as fainting and the need for home care. It is dangerous to determine the presence of respiration or pulse, so this should not be done.

It is impossible to remove from the wounded means of protection (helmet, bulletproof vest), because you thereby expose yourself to the additional risk of being hit by enemy fire.

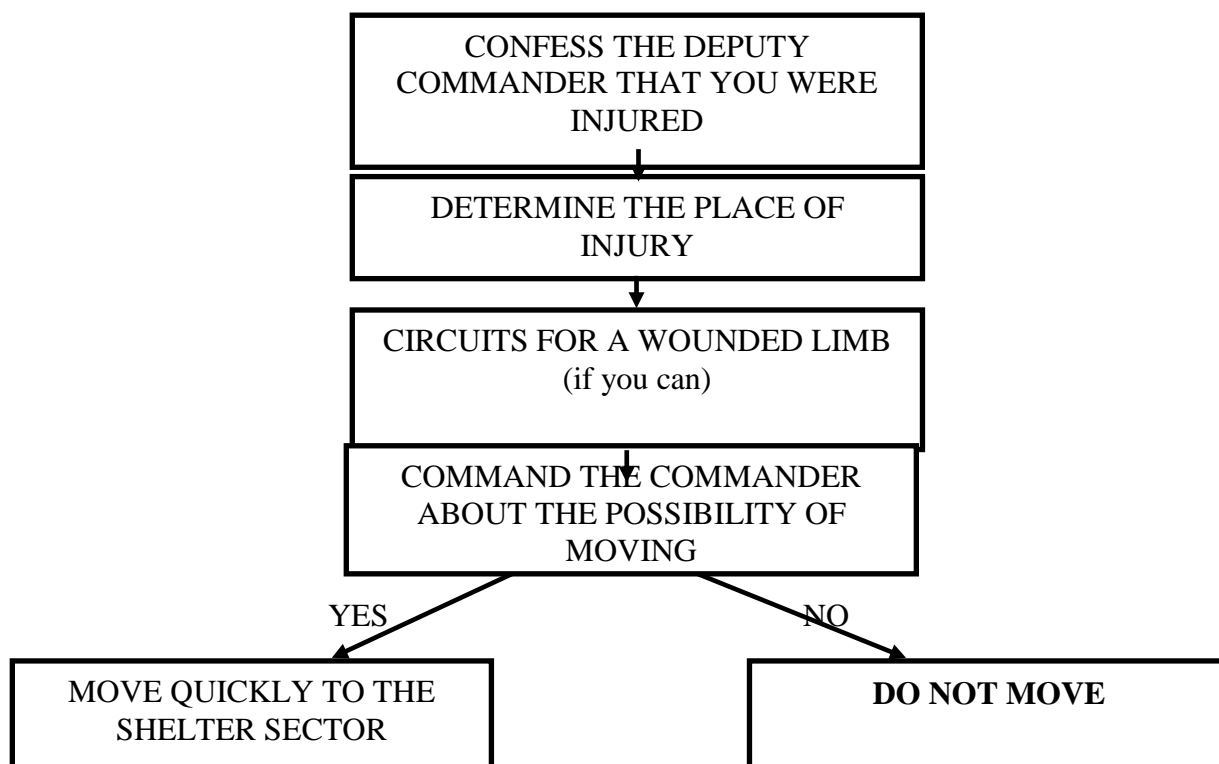
The wounded should be transported from the shelling sector only if the tactical situation allows.

In the firing sector, only external bleeding can be stopped by locating the wound in the arms or legs (visible wound from which blood flows, a stain on clothing or a puddle of blood under part of the torso, arm or leg) with a tourniquet.

During any manipulation in the shelling sector, the wounded and the rescuer are in danger, so everything must be done as quickly as possible in compliance with the rules of personal safety (the rescuer does not rise above the body of the wounded lying on the ground).

In the shelling sector, home care is provided in the form of self- or mutual assistance in accordance with the tactical situation and according to appropriate algorithms.

ALGORITHM FOR PROVIDING DOMEDIC CARE IN THE SHOOTING SECTOR (SELF-HELP)

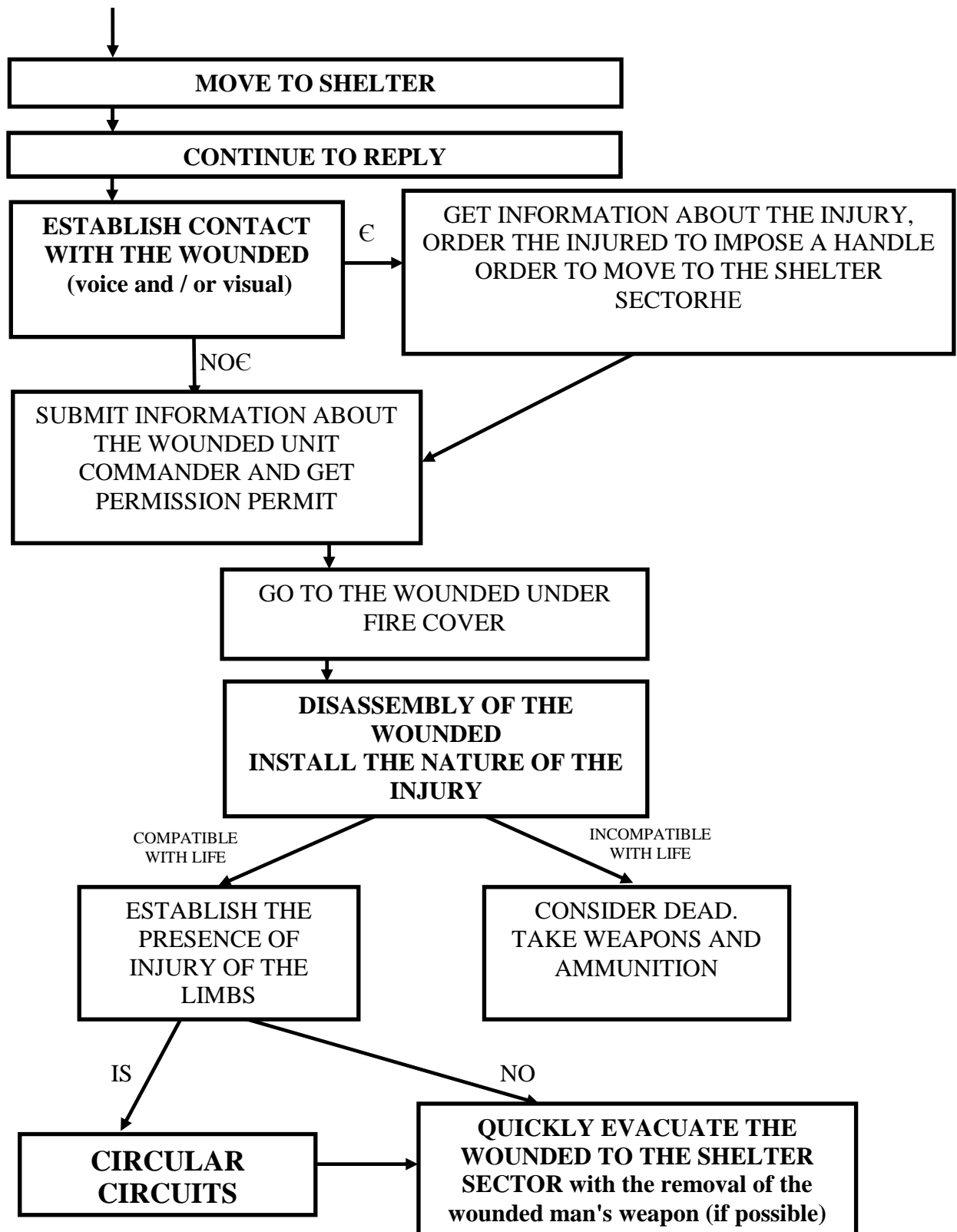


Instructions for providing home care in the shelling sector (self-help)

1. Tell the unit commander that you are wounded.
2. Determine the location of the injury.
3. If you are wounded in the limb and you saw blood - put a tourniquet.
4. Inform the unit commander about the possibility of movement.
5. Get permission and move to the shelter sector if you can move.
6. If you can not move, then notify the commander and do not move.

ALGORITHM FOR PROVIDING HOUSEHOLD AID IN THE SHOOTING SECTOR (MUTUAL ASSISTANCE)

I SAW THE WOUNDED I



Instructions for providing home medical care in the shelling sector (mutual assistance)

1. Perform a combat mission.
2. Saw the wounded soldier - establish voice contact with the wounded, find out the location of the wound and the possibility of movement.
3. If the wounded does not answer - go to item 7.
4. Order the wounded to apply the tourniquet themselves (if necessary).
5. If he can move on his own, order him to move on your command and provide him with fire cover.
6. If he cannot move on his own, tell him not to move.
7. Pass information to the unit commander about the impossibility of the wounded to move.
8. Get permission to advance on the wounded.
9. Follow the wounded under cover of fire.
10. Disarm the wounded.
11. Determine whether the injured person's injuries are incompatible with life. If so, consider the wounded dead and return to the shelter yourself.
12. If there are no life-threatening injuries - establish the presence of bleeding from the limb (limbs).
13. If there is bleeding from the limb - apply a tourniquet. First of all, use his harness, in the absence - your own.
14. Move the wounded to the shelter sector on command and under cover of fire with the removal of the wounded weapon (if possible).

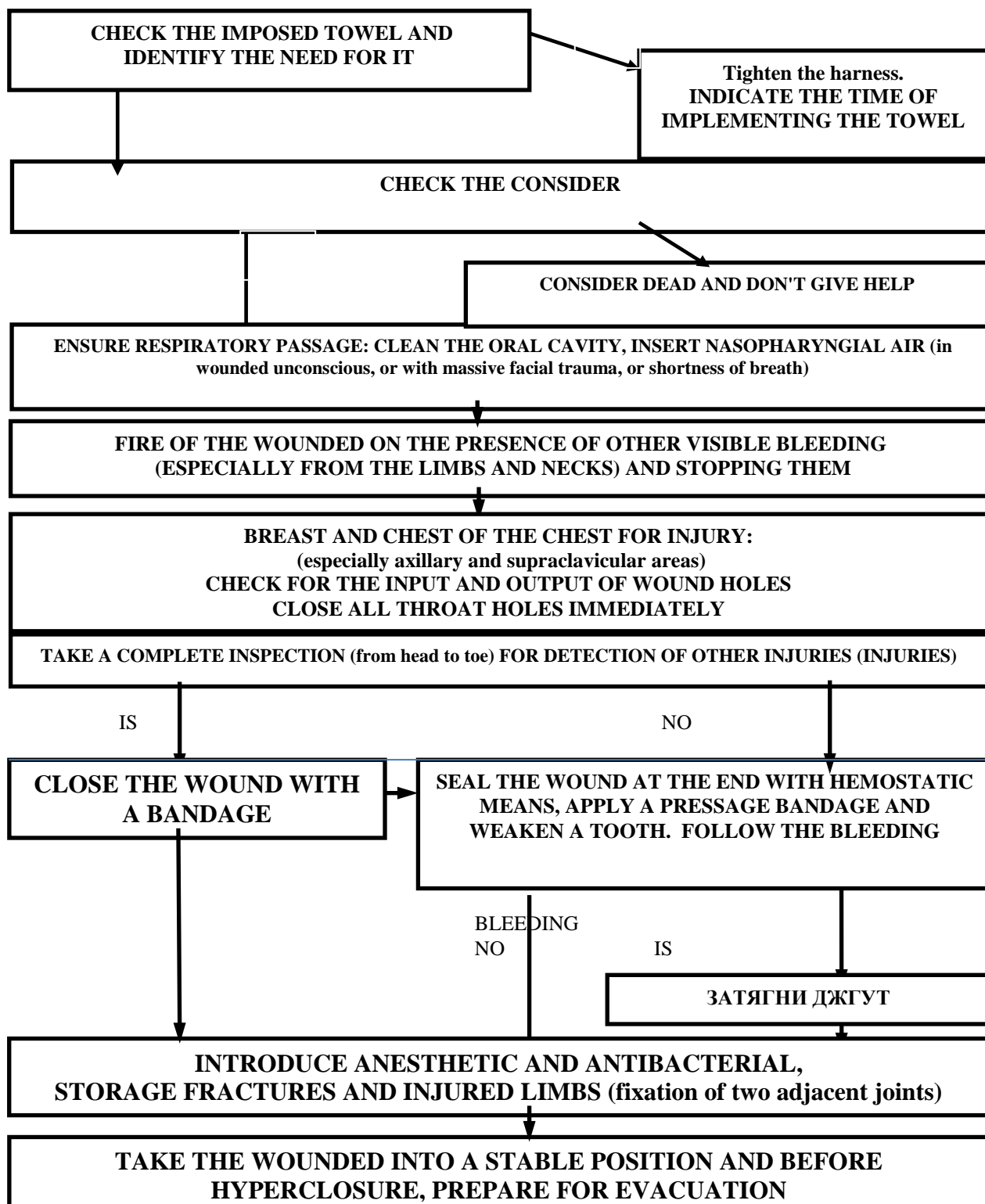
Assistance in the shelter sector

This is the assistance provided by a health instructor when he and the wounded are in hiding and the risk of contact with the enemy is minimized. Available medical equipment is still limited to what is used in mission personnel. Evacuation time can vary from minutes to several hours.

The scope of home care in the shelter sector is aimed at a deeper assessment and treatment of the victim. The wounded and the rescuer are now in a slightly less dangerous situation, the conditions are more suitable for a quick assessment and assistance in case of injury. However, assessment and assistance are still dictated by the tactical situation. In some cases, assistance in the shelter sector will be limited to ambulances for the wounded with the expectation of re-engagement with enemy forces at any time.

Minor examinations should be avoided and, in this case, the focus should be on providing the necessary assistance. On the contrary, assistance can be provided in a larger amount if the group has reached the expected evacuation site (without persecution and is awaiting it). In these circumstances, there may be enough time to take all the assistance measures that are possible during this phase of assistance.

ALGORITHM FOR PROVIDING DOMESTIC CARE IN THE SHELTER SECTOR



1. Examine the wounded for other visible bleeding (especially from the extremities and neck) and stop them.
2. Check the chest for injuries, especially the axillary and supraclavicular areas
3. If there is a chest injury, cover all wounds with an airtight bandage.
4. If the wounded is unconscious, or with a facial injury, or burns, then ensure airway patency - put a nasopharyngeal airway.
5. Conduct a complete examination of the wounded (from head to toe) and identify other injuries. If they are, they are bandages.
6. Seal the wound on the limb, apply a pressure bandage, loosen the tourniquet.
7. If bleeding has resumed, tighten the tourniquet again.
8. Introduce analgesics and antibacterials.
9. Immobilized fractures and injured limbs fixing two adjacent joints.
10. Put the wounded in a stable position.

A wounded person with a change of consciousness should be disarmed immediately in a state of excitement, as armed fighters with a change of consciousness or in a state of excitement may use their weapons inappropriately. Take away all available weapons - machine gun, pistol, knife, grenades, explosives. Explain to the wounded that you will keep the weapon until the health instructor examines it..

Materials for self-control:

A. Tasks for self-control: (tables of the scheme, drawings of graphics)

1. Draw a diagram of the algorithm for examining the victim at the scene.
2. Write an algorithm for examining the victim at the scene.
- 3.

Tasks for self-control:

1. When approaching the scene, you found an adult victim conscious in a supine position. The place is safe. The victim is conscious. What are your priorities?

A. Begin the review according to the CABC method.

B. Introduce yourself, explain that you are prepared to provide DMD, offer help, explain what you are preparing to do.

C. Call an ambulance.

D. Ensure airway patency.

E. Find out if there is a first aid kit?

2. You have started to help the victim at the scene. The place is safe. He is lying on his stomach, unconscious. Which of the following actions will you perform in the first place?

A. Ensure airway patency.

B. Determine whether there are fractures

C. Find out if the victim is breathing

D. Check for heart rate

E. Find out if there is massive bleeding

3. You have started to provide assistance to the victim at the scene in a supine position. In which case do you turn the victim on his back?

- A. The presence of an open fracture
- B. Upon obtaining permission from surrounding witnesses to the event
- C. Lack of breathing
- D. Absence of other witnesses to the accident
- E. All of the above

Standards of answers to tests:

- 1. B
- 2. E
- 3. C

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