

МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ  
БЕЛОРУССКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ  
КАФЕДРА ПРОПЕДВТИКИ ВНУТРЕННИХ БОЛЕЗНЕЙ

**Т. Т. Копать, Э. А. Доценко**

**НАБЛЮДЕНИЕ И МЕДИЦИНСКИЙ УХОД  
ЗА ПАЦИЕНТАМИ ПРИ ТЕРМИНАЛЬНЫХ  
СОСТОЯНИЯХ. ПАЛЛИАТИВНАЯ  
МЕДИЦИНСКАЯ ПОМОЩЬ**

**MONITORING AND MEDICAL CARE  
FOR PATIENTS WITH TERMINAL CONDITIONS.  
PALLIATIVE MEDICAL CARE**

Учебно-методическое пособие



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К65 Наблюдение и медицинский уход за пациентами при терминальных состояниях. Паллиативная медицинская помощь = Monitoring and medical care for patients with terminal conditions. Palliative medical care : учебно-методическое пособие / Т. Т. Копать, Э. А. Доценко. – Минск : БГМУ, 2025. – 38 с.

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Приведены особенности ухода за лицами пожилого и старческого возраста, пациентами с ограниченной подвижностью, представлены принципы и порядок оказания паллиативной медицинской помощи.

Предназначено для студентов 2-го курса медицинского факультета иностранных учащихся, обучающихся по специальности «Лечебное дело» на английском языке.

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## MOTIVATIONAL CHARACTERISTICS OF THE TOPIC

**The total time of classes:** 3 hours.

An urgent condition in clinical practice is considered to be pathological changes that cause rapid deterioration of the patient's condition and, in the absence of immediate medical care, pose a threat to the patient's life.

The role of average medical workers in relieving critical conditions of patients is extremely great. The nurse most often first notes a sharp deterioration in the patient's condition. The effect of intensive care and the patient's life depend on the knowledge, skills and even actions of the medical staff. Knowledge of the basics of emergency care for patients in a life-critical condition is an axiom for a medical professional.

Prolonging human life and increasing the chances of survival in cases of diseases that previously inevitably led to death, undoubtedly, it is one of the most important achievements of modern medicine. The improvement of medical technologies, especially in intensive care, makes it possible to fight for life in a situation yesterday they were considered hopeless. At the same time, the fight against death for a long time, especially with slowly progressing, untreatable diseases, generates many economic, social and legal problems related to the provision of medical care and care for terminally ill people.

**The purpose of the lesson:** to master the methodology of monitoring the patient's condition, as well as the procedure for carrying out cardiopulmonary resuscitation measures, to familiarize with the provision of palliative care to patients.

**Lesson objectives:**

- learn the methodology of monitoring the patient 's condition;
- familiarize yourself with the monitoring protocol;
- to master the methodology for assessing the stages of terminal condition: pre-agony, agony, clinical death;
- to master the methodology of cardiopulmonary resuscitation measures;
- to master the technique of caring for the elderly and senile;
- to familiarize yourself with the basic provisions of palliative care.

**Requirements for the initial level of knowledge.** To fully assimilate the topic, it is necessary to repeat:

- from normal anatomy: the anatomical structure of organs and organ systems;
- normal physiology: functions of organs and organ systems.

**Control questions on the topic of the lesson:**

1. Definition of the term "terminal state".
2. Characteristics of the stages of terminal condition: predagonia, agony, clinical death.
3. The method of monitoring the patient's condition.

4. Characteristics of the stages and stages of cardiopulmonary resuscitation.
5. Methods of implementation of cardiopulmonary resuscitation measures.
6. Features of medical care for the elderly and senile.
7. Definition of the concept of “palliative care”.
8. Types of palliative care.
9. Basic principles of palliative care.
10. Approaches to palliative

## INTRODUCTION

The range of diseases in which life-critical conditions can occur is very large. These can be both long-term chronic diseases and sudden acute ones.

The severity of the patient’s condition is determined by the degree of violation of the basic functions of the body. With all the variety of etiological factors and causes, their pathogenesis invariably includes such pathophysiological shifts as hypoxia, disorders of hemodynamics and especially microcirculation, heart and liver failure, impaired water-salt metabolism and acid-base state, hemostasis, etc. Assessment of the degree of change in the anatomical and physiological foundations of vital functions serves as the basis for the pathogenesis of urgent conditions requiring immediate action by medical personnel.

Patients in serious and extremely serious condition are hospitalized or transferred for further treatment to intensive care units (ICU).

## TERMINAL STATE. CARDIOPULMONARY RESUSCITATION

The occurrence of critical conditions bordering on death is a relatively common phenomenon.

**Resuscitation** is a system of measures aimed at restoring the vital activity of the body and removing it from a terminal state. The terminal state develops due to various causes (profuse bleeding, cerebral hemorrhage, sudden stop of blood circulation, etc.).

**The terminal state (TS)** is a borderline state between life and death, which is characterized by gross violations of all vital organs, as well as metabolic processes.

There are three stages of the vehicle:

- predagonia;
- agony;
- clinical death.

**The pre-diagonal state.** Consciousness is sharply depressed or absent. The skin is pale or cyanotic. Blood pressure progressively decreases down to zero, the pulse in the peripheral arteries is threadlike, but there is also a satisfactory filling in the carotid and femoral arteries. At the initial stages, tachycardia is noted, followed by a transition to bradycardia or bradyarrhythmia. Breathing quickly passes from tachy to bradyfor- $\mu$ . Stem reflexes are disrupted, pathological ones may appear. The severity of the condition is rapidly aggravated by increasing oxygen starvation and severe metabolic disorders. Breathing becomes shallow and frequent. The pupils are moderately dilated, their reaction to light is reduced. The central genesis of the above violations should be emphasized.

The transitional stage from the pre-diagonal state to agony is the so-called *terminal pause*, which is characterized by a sudden cessation of breathing and the extinction of corneal reflexes. The duration of this pause is from a few seconds to 3 minutes. Then comes the second period of death — agony, as a result of which pain sensitivity disappears, all reflexes fade away, and loss of consciousness occurs. The main sign of **agony** is a respiratory disorder, which can be weak, rare or vice versa, short and maximum inhalation and rapid exhalation with a large amplitude of respiration with the participation of auxiliary muscles and facial muscles, sharp cyanosis of the skin.

With each breath, the head tilts back, the mouth opens wide. The heart rate gradually slows down, the pulse becomes thready, barely palpable. Blood pressure decreases to 20–40 mmHg, sometimes occipital muscle rigidity and general tonic seizures may develop. It appears involunta involuntary urination and defecation appear. The body temperature drops sharply. The duration of agony depends on the causes of death.

*Death* is the cessation of vital activity of the body. There is a distinction between clinical and biological death.

In case of **clinical death**, it is possible to revive the body. For her, respiratory and cardiac arrest, dilation of the pupils are characteristic. However, during this period, the main metabolic processes continue for another 4–7 minutes due to anaerobic glycolysis. Diagnosis is based on the absence of cardiac activity, respiration, as well as the absence of reflexes.

After clinical death, **biological death occurs**, which is characterized by such disorders in the central nervous system, in which the restoration of vital activity of the body is impossible. With biological death, muscle relaxation occurs, the body cools down to the ambient temperature. Later, cadaverous spots appear on the underlying parts of the body.

Treatment of patients, finding Those in a life-critical condition are usually carried out in an intensive care unit or intensive care wards.

**Cardiopulmonary resuscitation** is a system of urgent measures performed in order to remove the body from the vehicle and subsequently maintain life.

According to P. Safar (1997), 3 stages and 9 stages are distinguished during resuscitation.

*Stages and stages of cardiopulmonary and cerebral resuscitation:*

**Stage I** (basic life support):

- A (airway open control);
- B (breathing);
- C (circulation).

The first stage is carried out immediately at the scene by any person who knows how to provide assistance in the first three stages (ABC).

**Stage II** (further life support):

- D (drugs and fluids);
- E (ECG);
- F (fibrillatio).

The second stage involves the involvement of specially trained medical personnel with appropriate equipment and necessary medicines.

**Stage III** (long-term life support):

- G (gauging);
- H (human mentation);
- I (intensive care).

The third stage of treatment is carried out in an intensive care unit.

Since 2010 year, the classic ABC scheme (restoration of the patency of the respiratory tract → the simplest artificial lung ventilation (ventilator) → indoor heart massage) has been replaced by a different procedure — ACB.

The importance of the so-called survival chain is still relevant — 5 stages of saving a patient with circulatory arrest, without each of which the result is unattainable:

- 1) immediate diagnosis of circulatory arrest and power calls;
- 2) immediate initiation of basic chest resuscitation;
- 3) the fastest electric pulse defibrillation;
- 4) extended intensive care, with the use of special devices and drugs;
- 5) post-resuscitation treatment.

In 2015 year a significant aspect was added to this list: resuscitation is recognized as a public matter requiring the participation of anyone who happens to be nearby.

It is necessary to take into account the time factor: the help provided in the first minutes increases the survival rate to 50–70 %. But it is possible to achieve such indicators only by error-free actions.

The first stage of CAP includes three stages:

1. Air way open — to restore the patency of the respiratory tract.
2. Circulation of his blood — proceed to manual chest compression.
3. In Breathe for victim — start a ventilator.

**The method of execution.** The main resuscitation measures in clinical death are *indirect (closed) heart massage and artificial respiration*, which should be performed simultaneously.

The immediate task of indirect heart massage is to restore blood circulation in the body, that is, to maintain blood circulation in vital organs in the absence of cardiac activity. The earlier a heart massage is prescribed, the better the effect. It should be remembered that from the moment of cardiac arrest to the development of irreversible changes in the brain, no more than 4–6 minutes pass. It is during this period of time that we must.

For enhanced indirect heart massage, it is necessary to place the patient on a hard surface (floor or table). The doctor stands on the side and places one palm on the lower third of the patient's sternum, and places the other palm on the first. The arms should be straightened and the shoulder girdle should be above the patient's chest. Compression is performed with a frequency of 100–120 per minute by vigorous sharp pressure on the patient's sternum using his body weight so that the sternum shifts 5–6 cm to the spine. In this case, the heart is squeezed between the sternum and the spine, and blood is ejected from the ventricles into the aorta and pulmonary trunk, i. e. artificial blood circulation is carried out. When compression on the sternum stops, it rises, and the heart fills with blood from the hollow veins. Only after performing 30 chest compressions at the beginning, the airways are prepared to perform two vigorous breaths (Fig. 1).

The main condition for the effectiveness of artificial respiration is maximum tilting of the head back, in which the root of the tongue and the epiglottis move forward and open free access of air into the larynx (Fig. 2). The respiratory volume during artificial inhalation should be 700–800 ml, i. e. the usual respiratory volume in the resting state of the conducting person.

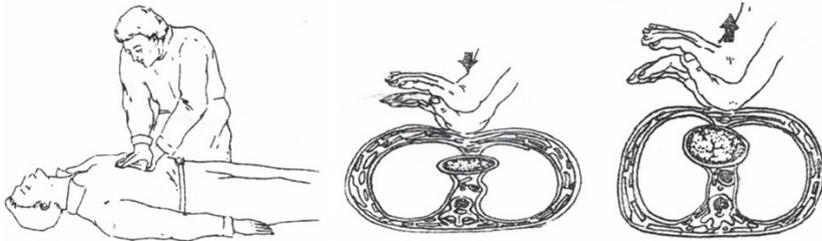


Fig. 1. Indirect heart massage



*Fig. 2. Position of the patient's head*

During artificial respiration, the rescuer stands to the side of the patient, squeezes the wings of the nose with one hand, with the other slightly opens his mouth behind the pillow. After taking a deep breath, he makes an energetic sharp exhalation, then turns his head to the side. The inhalation is carried out within one second. Ventilation of the lungs is effective if the rise and fall of the chest are visible.

Currently, mouth-to-mouth artificial respiration is being used less and less frequently. For this purpose, S-shaped air ducts, a mouth mask with a facial obturator, an Albu bag, disposable masks with a unidirectional air flow valve, etc. are used.

It is recommended to maintain a compression/respiration ratio of 30 : 2 during cardiopulmonary resuscitation, regardless of the number of rescuers. Chest compression — 100–120 per minute. Inhalation is carried out every 6–8 seconds, thus, the frequency of artificial respiration is 8–10 times per minute. More frequent breathing is not justified.

Manual chest compressions remain the only recommended technique for prosthetics of blood circulation (less and less often we say “closed heart massage”: not only the heart, but also the entire chest becomes the chamber of the hand pump, i.e. “passive” ventilation of the lungs is carried out due to compression).

Breaks in compressions should be minimal in order to maintain the movement of the “accelerated” blood mass as long as possible. Emphasis on quality: compression rate — 100–120 per minute. Extend the chest by 5–6 cm, make sure that after each push it is completely straightened.

Criteria for the effectiveness of cardiopulmonary resuscitation:

- the appearance of a pulse in the carotid arteries;
- pupil constriction;
- increase in systolic blood pressure to 70 mmHg.

When inhaling, the chest rises and falls, cyanosis disappears, independent breathing and cardiac activity may occur.

Resuscitation measures should not be stopped until the arrival of professional medical workers or before the arrival of an ambulance team. However, if, 30 minutes after the start of heart massage and artificial respiration, cardiac activity does not recover, there are no signs of effective and sufficient blood supply to the brain (pupils remain wide and do not respond to light), continued reanimation may be considered inappropriate, due to irreversible changes in brain cells.

If resuscitation measures do not lead to the restoration of circulation and respiration, biological death occurs (the protocol for determining brain death is filled in, Appendix No. 1).

Stages II and III of resuscitation measures according to P. Safar are carried out in the conditions of the intensive care unit.

### **RULES FOR HANDLING A CORPSE**

After the biological death is confirmed by the doctor and the registration in the medical card of the inpatient patient (date, hour, minutes of the death statement), it is necessary to prepare the body of the deceased patient for transfer to the pathology department:

1. Put a screen by the bedside of the deceased (if there are other patients in the ward) or take the deceased to another room.

2. Put on gloves.

3. Remove the pillow from under the head of the deceased.

4. Place a plywood board under the deceased or place it on a hard surface.

5. Take off the clothes of the deceased.

6. Lay the deceased on his back.

7. Lower the eyelids of the deceased.

8. Tie the deceased's lower jaw.

9. Straighten the limbs of the deceased.

10. Cover the deceased with a sheet.

11. Leave the deceased in the ward for 2 hours.

12. Rewrite the deceased's belongings, put them in a bag for transfer to relatives.

13. Remove the bedding from the deceased's bed, including the mattress, pillows, and blanket, place it in a bag and send it to the disinfection chamber.

14. Wipe the bed and bedside table in accordance with the requirements of the sanitary regime.

15. Examine the deceased after 2 hours and, if there are reliable signs of death (rigor mortis, cadaveric spots, decrease in body temperature), indicate the full name, medical history number, date and time of death on a label made of glue, which in many medical organizations is attached to the arms or leg of the deceased.

16. Transport the corpse on a special gurney to the pathology department with accompanying documentation filled out by a doctor.

17. Take off your gloves.

18. Wash your hands.

Valuables are removed from the deceased in the medical department by a nurse in the presence of a doctor and transferred to the custody of the senior nurse, which is drawn up by an act. Valuables and belongings of the deceased are given to relatives on receipt by the senior nurse of the department. If it is not possible to remove valuables from the deceased, all valuables left behind should be listed in the inpatient patient's card.

### **FEATURES OF FACIAL CARE ELDERLY AND SENILE AGE**

When caring for the elderly (60–74) and senile (75–90) age, it is necessary to take into account the morphological and physiological changes that occur in the body from the outside:

1) nervous system:

– increased anxiety levels;

– a decrease in the level of social contacts, a “difficult old man” situation arises;

– a change in heart rhythm, insomnia;

– mental and behavioral retardation;

– the development of depressive states;

2) cardiovascular system:

– reduction of the general blood supply to tissues and organs;

– decrease in the adaptive capabilities of blood vessels, especially large ones

(for example, the aorta);

– reduction of myocardial energy;

– weakening of the role of nervous regulation, increasing importance of human mechanisms;

– development of the atherosclerotic process in blood vessels;

3) urinary system:

– reduction of the number of nephrons;

– decrease in kidney mass (parenchymal tissue is replaced by developing connective tissue;

– renal filtration and excretory function weakens by 35–45 %;

– decrease in urinary excretion (50 % of the diuresis of 20-year-olds);

– a decrease in the size of the bladder, the walls of which become less elastic and the tone of the bladder sphincter decreases (lead to urinary incontinence);

– the development of benign prostatic hypertrophy (often in men);

4) respiratory organs:

- changes in the musculoskeletal system of the chest, in the thoracic spine;
- violation of mucociliary clearance;
- the pulmonary parenchyma loses its elasticity;
- decrease in lung ventilation capacity;
- reduction of pulmonary gas exchange;

5) digestive organs:

- decrease in the strength of the chewing muscles;
- decreased sensitivity of the tongue due to a decrease in the number of oral receptors;

- tooth loss (food is chewed and processed worse with saliva);
- decreased motility of the esophagus and intestines;
- decrease in the secretory capacity of the stomach;
- a change in the intestinal microflora towards an increase in putrefactive microorganisms;

- increased tendency to constipation;
- intestinal mucosa regenerates 1.5 times slower;

6) abdominal organs:

- atrophy of its active elements occurs in the pancreas, as a result, functional activity decreases;

- decrease in the number of hepatocytes (reduced liver mass and volume);
- violation of protein-forming, glycogen-forming antitoxic, energy-forming and other liver functions;

7) thyroid gland:

- decreased secretion of hormones (thyroxine, triiodothyronine);
- a decrease in the intensity of basal metabolism, which in turn leads to a decrease in muscle tone, physical and mental weakness, a tendency to increase cholesterol, obesity, atherosclerosis;

8) musculoskeletal system:

- development of muscle atrophy and flabbiness;
- development of osteoporosis (tendency to fractures and fractures of bones);
- reduction of epiphyses and diaphysis of tubular bones;
- progression of degenerative processes in joints (cartilage, calcification of tendons and joint bags);
- increased curvature of the spine (thoracic kyphosis).

## **BASICS OF HYGIENE AND GENERAL CARE IN OLD AGE AND SENILITY**

### **ORAL AND DENTAL HYGIENE, DENTURE CARE**

Oral hygiene is performed daily in the morning after waking up and before going to bed, immediately after each meal, as well as every time after vomiting. The items of individual use are a toothbrush, toothpaste, hygienic lipstick, removable dentures.

Goals and objectives of the event:

1. Elimination of food residues, prevention of bad breath, tartar, etc.
2. Ensuring the normal functioning of the salivary glands (excretion of a normal amount of saliva).
3. Prevention, detection, and treatment of damaged teeth, gums, and the oral cavity.

Oral hygiene involves the following steps:

1. Preparatory stage:

– explain to the patient the purpose and course of the procedure, get oral consent (if the patient is conscious);

– to give the patient a semi-sitting position by lifting the head end of the bed or placing a pillow under the shoulders (if the patient is conscious and can control the act of swallowing), the patient with a disorder of consciousness should lower the headboard of the bed as low as possible and turn his head to one side or lay him on his side so that the liquid flows out of the mouth, and does not accumulate in it, what can lead to asphyxia;

– put a bib on the patient;

– wash your hands with soap, dry with a disposable towel;

– put on a bib;

– wash your hands with soap, dry with a disposable towel;

– put on gloves, a mask.

2. Oral cavity treatment:

– carefully remove removable dentures (if available) and take daily hygienic care of them. Put cleaned dentures in a container “For disinfection and storage of dentures”;

– take a gauze cloth in your right hand, moisten it with a solution for processing and rinsing the oral cavity;

– take a spatula in your left hand and push your upper lip up with it;

– wipe the mucous membrane of the upper part of the vestibule of the mouth and the outer side of the upper teeth with a gauze cloth;

– push the lower lip down with a spatula;

– wipe the mucous membrane of the lower part of the vestibule of the mouth and the outer side of the lower teeth with a gauze cloth;

- place a spatula and a gauze napkin in a container “For disinfection of medical devices (IMN)”;

- ask the patient to open his mouth;

- examine and assess the condition of the oral cavity (alarming symptoms: hyperemia and swelling of the oral mucosa, the presence of ulcers on the mucous membranes, bleeding from the gums, increased sensitivity of teeth to various irritants, exposure of the necks of teeth, tooth mobility, formation of cracks in the corners of the lips, white-gray plaque on the mucous membranes of the mouth, soreness and swelling of the salivary glands);

- take a gauze cloth in your right hand, moisten it with a solution for processing and rinsing the oral cavity;

- wipe the tongue with a gauze napkin from top to bottom, removing the plaque from it (change gauze napkins 2–3 times);

- place the used gauze napkins in the container “For de-infection of the IMN”.

### 3. Brushing teeth:

- take a gauze napkin in your right hand, moisten it with a solution for processing and rinsing the oral cavity;

- consistently wipe the back surface of the upper and then lower teeth, regularly changing gauze wipes;

- place gauze wipes in a container “For disinfection of the IMN”

### 3. Brushing your teeth:

- take a gauze cloth in your right hand, moisten it with a solution for processing and rinsing the oral cavity;

- consistently wipe the back surface of the upper and then lower teeth, regularly changing gauze wipes;

- place gauze napkins in a container “For disinfection of the IMN”;

- take a toothbrush, apply a small amount of toothpaste on it;

- thoroughly brush the surfaces of the teeth in the sequence: chewing, anterior and lateral, swiping from top to bottom, from bottom to top and horizontally in circular movements;

- put the toothbrush in a storage container;

- offer or help the patient to rinse the mouth by bringing a glass of liquid (drinking water or mouthwash solution) to his mouth and placing a rinsing tray under his chin

### 4. Oral cavity treatment in patients with impaired consciousness:

- take a gauze napkin;

- ask the patient to open his mouth. In the absence of a result: hold your nose slightly so that you can breathe through your mouth, or moisten your lips and drip a couple drops of water so that they seep through your teeth (as a rule, in this case, the licking or sucking reflex is triggered, the mouth opens slightly). Fix the mouth

open by inserting cotton pads in the corners. To avoid biting the patient's fingers, do not treat the oral cavity until fixing rollers are inserted into the open mouth;

- wrap the patient's tongue with a gauze napkin and pull it over with your left hand;

- take a gauze napkin in your right hand, moisten it with a solution for oral cavity treatment;

- wipe the mucous membrane of the lower part of the vestibule of the mouth, the outer side of the lower teeth and the inner side of the lower teeth and gums with a gauze

- place a gauze napkin in a container “For disinfection of the IMN”;

- take a gauze napkin in your right hand, moisten it with a solution for processing and rinsing the oral cavity;

- gently holding the tongue with your left hand, wipe it with a gauze cloth from top to bottom, removing the plaque (change gauze napkins 2–3 times);

- place gauze napkins in a container “For disinfection of IMN”;

- remove cotton pads from the mouth and place them in a container “For disinfection of IMN”.

5. The final stage:

- insert a washed denture into the mouth, if necessary, pre-applying glue or cream to the gums to improve its fixation;

- remove the bib;

- dry the lips of the resident with a towel or disposable napkin and lubricate them with glycerin or hygienic lipstick;

- rinse the toothbrush under running water, place it in a storage container with the head up and put it in a designated place for storage;

- take off gloves and place them in a container “For disinfection of IMN”;

- wash your hands with soap, dry;

- to help the patient to take a comfortable position in bed.

**Care for removable dentures.** Cleaning of dentures is carried out as follows:

1. Rinse the prosthesis over the sink under a stream of cold water (hot water can change the shape of the prosthesis), removing all visible food residues from it.

2. Clean the prosthesis with a soft-bristled toothbrush, pay special attention to the places where bacterial plaque and tartar are most often deposited — the side surfaces of the upper and lower rows of teeth.

3. It is allowed to use low-abrasive (children's) toothpaste only for cleaning dentures made of acrylic plastic, for slightly elastic dentures it is allowed to use only special products or completely non-abrasive toothpastes or gels.

4. Rinse the denture under running water and put it in a container “For disinfection and storage of dentures”.

It is very important not to break the denture during washing, for this it is necessary to handle it with care, hold the prosthesis firmly with your hands and

try not to drop it, because dentures often break when falling. In addition, plastic or metal hooks of the prosthesis should not be bent during cleaning.

At intervals of about 1–2 times a week, it is necessary to carry out hygienic treatment of a removable denture with special means (cleansing effervescent tablets). To do this, you need to:

- prepare a cleansing solution (dissolve the tablet in water in accordance with the instructions for use) in a container “For disinfection and storage of dentures”;
- completely immerse the denture in the solution;
- at the end of the exposure time, wash the denture from the remnants of the cleaning solution by completely immersing it in water (the ratio of the volume of water and the volume of the prosthesis is at least 3 : 1) or by rinsing under running water for 2–3 minutes.

**It must be remembered:**

- at night, patients usually remove dentures and store them in a container “For disinfection and storage of dentures” with water or a special solution that must completely cover the prosthesis, since the product may deform when drying;
- do not place dentures in hot water or solution, as this may cause them to deform;
- in the presence of diseases of the oral cavity, bedsores from dental protists, etc. oral hygiene should be carried out every 4 hours;
- a patient with painful changes in the oral cavity requires a special approach and delicate execution of actions;
- with severe soreness in the oral cavity, thermally and chemically sparing food should be used;
- when carrying out oral cavity treatment, it is necessary to strictly observe the rules of antiseptics for the prevention of inflammatory diseases.

### **HAIR AND SCALP CARE FOR A PATIENT ON BED REST**

The main purpose of this procedure is the hygiene of the scalp. If you do not do this, your hair, especially long ones, gets tangled, gets dirty quickly, and looks untidy. This procedure helps to cleanse the skin and scalp of sebaceous secretions, which are a breeding ground for the development of bacteria, and prevent the development of dandruff, stimulates circulation. At the same time, taking care of your appearance improves your well-being. In some cases, hair care becomes a therapeutic procedure (for example, when it becomes necessary to remove parasites).

You should wash your hair as needed, but at least once every 7 days. Before washing and after shampooing, the hair must be combed. The brush or comb should have blunted teeth so as not to injure the head and cause pain. When tangling hair, a brush with sparse teeth is used. For a patient on bed rest, a person who cannot

take a sitting position should turn his head to one side and then to the other to comb his hair. Combing the hair is necessary slowly and carefully, starting at the ends, gradually moving towards the roots of the hair. It is necessary to comb your hair so that you feel comfortable.

The sequence of shampooing:

1. Explain to the patient the purpose and course of the procedure.
  2. Get an oral voluntary informed consent from the patient for the upcoming procedure.
  3. Check the indoor air temperature — it must comply with hygienic standards and be at least 22–23 °C.
  4. Prepare the necessary equipment for the procedure, close the windows, provide the patient with confidentiality conditions — if necessary, shield the patient's bed for the duration of the manipulation.
  5. Use a water thermometer to check the water temperature in a bucket of warm water — it should be within 38–40 °C.
  6. Wash your hands with soap and dry with a disposable towel
  7. Put on gloves.
  8. Put on a disposable apron.
  9. Place a stool at the head of the bed on the work side, an empty basin on it, place a bucket of warm water, a jug and shampoo next to it.
  10. Remove all hairpins and hairpins from the patient's hair, remove glasses (if any), comb the hair.
  11. Strip the patient to the waist and cover the exposed part of the torso with a sheet.
  12. Remove the pillow, move the patient a little closer to the headboard so that the head hangs down a little, put a roller under the patient's shoulders. Make sure that the position of the body does not cause painful sensations in the patient.
  13. Place an oilcloth under the stove and the patient's head, the end of which is placed in a basin on a stool.
  14. Cover the patient's eyes with a towel or diaper to protect them from falling water and soap suds.
  15. Scoop warm water from a bucket with a jug and pour a small amount of water on your head.
  16. Ask the patient if the water temperature suits him.
  17. Add cold or hot water at the patient's request. If the water temperature is acceptable, gently moisten the patient's hair.
- To reduce the amount of splashes, the spout of the jug should be positioned as close to the patient's head as possible. You do not need to pour a lot of water, but only the minimum amount necessary to gradually wet the entire scalp.
18. Apply a little shampoo to your palms and rub them one against the other.

19. With both hands, evenly distribute the shampoo over the scalp and, periodically lifting the head and supporting it with your hand, massage the foam and distribute it through the hair. The hair should be completely moisturized with shampoo. Washing the scalp and hair should be carried out for 3–4 minutes.

20. Scoop warm water from a bucket with a jug and, carefully watering, rinse off all shampoo from the scalp and hair of the patient. If the hair is heavily soiled or if the patient asks, you can shampoo his hair again.

When washing your hair, make sure that water and shampoo do not get into the patient's ears and eyes. If shampoo gets into your eyes, rinse your eyes with water.

21. Unwrap a clean, dry towel, lift the patient's head and rub his hair dry with it. Carefully comb your hair. If the resident is cold, wrap his head in a towel or tie a scarf.

22. Put underwear on the patient.

23. Give the patient a comfortable position in bed, cover him with a blanket.

24. Put the kleenex, towel, roller lying under the patient's head in a waterproof bag for used laundry.

25. Pour the water from the basin into the sewer.

26. Disinfect the pelvis.

27. If necessary, change the sheet for the patient.

28. Comb the patient's hair. Invite him to look at the mirror.

29. Remove the disposable apron and gloves, place them in a container "For disinfection of waste material".

30. Wash your hands with soap, dry them with a disposable towel.

31. Ask the patient how he feels.

### **CHANGING UNDERWEAR FOR A PATIENT ON BED REST**

When a person is bedridden, linen needs to be changed more often, since it is constantly in contact with the body, and the skin is limited in natural breathing, in addition, many diseases are accompanied by increased secretion of sebaceous and sweat glands. Therefore, underwear should be changed at least once a week and immediately when it gets wet and visible dirt is detected. The procedure for changing underwear should be carried out with the utmost care. It is necessary to monitor the general condition of the patient, the safety of bandages, catheters, stomas, etc. It is more convenient and faster to replace dirty laundry with a group of two people. Timely replacement of underwear provides a sense of comfort to the patient, reduces the risk of developing pressure sores and skin infection.

The sequence of changing underwear:

1. Explain to the patient the purpose and course of the procedure.

2. Get an oral voluntary informed consent from the patient for the upcoming procedure.

3. Prepare the necessary equipment for the procedure, close the windows, provide the patient with confidentiality conditions — if necessary, shield the patient's bed for the duration of the manipulation.

4. Change the robe, carry out hygienic hand antiseptics, put on gloves.

5. Remove the blanket from the patient.

6. To give a sitting position in bed to the patient, holding him by the shoulders or back.

7. Grab the nightgown from the patient's back, gather it up to the neck from behind and up to the armpits in front.

It is forbidden to pull the shirt out from under the pressing parts of the body (back, buttocks, etc.) of the patient, in order not to damage the skin by friction (and not to aggravate the bedsore process if it has begun to develop). It is necessary to lift the pelvic area or back and remove the shirt from under it.

8. Holding the patient in a sitting position with one hand, with the other hand, carefully transfer the assembled shirt over his head so that the shirt is on his chest.

9. Lift both hands of the patient and remove the sleeves of the clothes from the hands. If one of the patient's arms is injured, the healthy arm is first released, and then the sleeve is removed from the patient.

When performing the manipulation together, one holds the patient's back and arms, and the other carefully removes his clothes.

10. Put the dirty shirt in an oilcloth bag for used laundry.

11. Put on a fresh shirt: collect it along the back to the sleeves, then put it on your hands (if one arm is damaged, first put the sleeve on the sore arm, then on the healthy one), lift the patient by the shoulders, throw the neck over his head and gently straighten the shirt in front and back so that there are no folds.

12. Lay the patient down, give him a comfortable position in bed. To be interested in his well-being.

13. Take off the gloves and immerse them in a container "For disinfection of the treated material".

14. Change the robe.

15. Wash your hands and dry with a towel.

#### **ACTIONS OF THE STAFF WHEN CHANGING A DIAPER FOR A LYING PATIENT**

The patient's diaper change should be carried out regularly, immediately after defecation and when the moisture saturation indicator — the test strip printed in the middle of the outer layer of the diaper is blurred by 80 % of its length.

An adult diaper should be replaced immediately after each bowel movement. With frequent urination — every 3 or 4 hours, but not the same 2–3 times a day.

The sequence of actions when changing a diaper for a bedridden patient:

1. Wash your hands with soap and dry with a towel.
  2. Wear protective gloves.
  3. Inform the patient that you are going to change his diaper.
  4. Remove the blanket (remove it from the bed, put it on the headboard or on a chair).
  5. Place a protective diaper under the buttocks of the patient, necessary to protect against contamination of the bed linen.
  6. Unbutton the Velcro, turn off the front of the diaper, keeping the discharge and trying not to dirty the laundry.
  7. Turn the patient sideways, with his back to himself, slightly bending his legs at the knees, and gently roll the lower part of the diaper into a tube. Remove the remaining part of the diaper from under the patient.
  8. Remove the filled diaper.
  9. Place the diaper in a waste collection bag.
  10. Wash the area of the patient's body under the diaper.
  11. Put a basin of warm water on a chair next to the bed.
  12. Check the water temperature with a water thermometer (it should be 37–38 °C).
  13. Add a gentle detergent to the water.
  14. Wet a clean textile cloth in a basin with warm water and detergent, squeeze it out slightly.
  15. Without changing the position of the patient (lying on his side), clean the skin of the buttocks from urine and feces, changing the wipes as they become dirty.
  16. Turn the patient on his back and clean the skin of the inguinal area of urine and feces, changing the wipes as they become dirty.
  17. Put used napkins in a container.
- In case of severe contamination of the inguinal area with feces, after cleansing the skin, perform a perineal toilet.
18. Dry the skin after washing with a clean textile cloth with wet movements.
  19. Leave the patient without a diaper for several minutes after carrying out hygienic procedures.
  20. Treat the area of the body under the diaper with a moisturizing cream, doing a massage along the way to prevent the formation of acne. To treat the buttocks and lumbosacral region, rotate the patient alternately on the right and left sides.
- If there are diaper rash on the body, treat them with talc or an antiseptic agent with a drying effect.
21. Prepare a new diaper for adults: take the diaper out of the package and activate it, that is, fold it in half along the longitudinal line and turn it easily (as if squeezing a towel); straighten all its folded parts, stretch a little and smooth out the folds.

22. Put a diaper on the patient.
23. Put the patient on his side, facing himself, bend one leg slightly at the knee (if you are standing on the right side of the patient, bend his right leg, if on his left side — his left leg).
24. Fold the diaper in half relative to the back (long) side.
25. Spread the patient's legs and pass the product between them, closing the perineum.
26. Push the diaper in the front-to-back direction.
27. Carefully distribute and align the back of the diaper so that it fits well to the body, and the diaper moisture saturation indicator is located on the spine line.
28. Smooth out and pull out the upper part of the diaper between the legs, then turn the resident over on his back.
29. Align and distribute the diaper on the abdomen so that as few folds as possible remain, the edges fit snugly to the body, and the inner sides of the product are directed upwards to avoid urine leakage.
30. Check that the fixators are positioned strictly in front of the patient's body, and the moisture saturation indicator is parallel to the spine line.
31. Sequentially fasten the Velcro fasteners: first, the lower one, so that the legs are tighter, then the upper ones.
32. Make sure that the diaper fits well and fits snugly to the body, the edges are not wrapped and do not cut into the body anywhere.
33. Cover the patient with a blanket.
34. Remove the bag containing the used diaper and the items of clothing.
35. Ventilate the room.

In the case when a person is able to hold onto handrails or stand, a diaper is put on according to a similar scheme. It is not much more convenient for a standing patient to do this.

It is important to remember that an improperly worn absorbent product can cause:

- scuffs and skin irritation, especially if the size is incorrectly selected;
- leakage of urine and subsequently contamination of the patient's clothes and bed;

- inconvenience to the patient and deterioration of his well-being.

The sequence of actions when conducting a perineal toilet for a pregnant patient:

1. Wash your hands with soap and dry with a towel.
2. Wear protective gloves.
3. Explain to the patient the necessity, purpose and course of manipulation.
4. Remove the blanket (remove it from the bed, put it on the headboard or on a chair).
5. Put a medical oilcloth under the buttocks of the patient, then a protective diaper.

6. Put the vessel under the sacrum (if the toilet is carried out when changing the diaper, then a diaper can be used instead of the vessel, which must be replaced).

7. Check the temperature of the water in the jug with a water thermometer (it should be 37–38 °C).

Features of men's washing:

1. Ask the patient (to help if necessary) to bend the legs at the knees and slightly spread them apart.

2. Stand to the right of the patient.

3. Take the jug in your left hand, a napkin in your right and, watering from the jug, rinse the inguinal area on one side, then on the other side, changing the napkins as they become dirty.

4. Place the used napkins in a container.

5. Take the penis with one hand (left), gently push the foreskin with two fingers.

6. In the other hand, take a napkin, previously moistened with water from a jug, and wash the head of the penis with movements in the downward direction from the outer opening of the urethra to the periphery.

7. Place the napkin in the container.

8. Take a new napkin and dry the glans penis with blotting movements. Return the foreskin to its natural position.

9. Carefully treat and dry the rest of the penis, the skin of the scrotum, perineum, anus, changing the napkins sequentially.

10. Place the used napkins in a container.

Features of washing a woman:

1. Ask the patient (to help if necessary) to bend her knees and slightly spread them apart.

2. Stand to the right of the patient

3. Take the jug in your left hand, the napkin in your right hand.

4. Watering the genital area of the patient with water, with movements from top to bottom from the pubis to the anus, wash the inguinal area on the right and left with a napkin.

5. Pour over the right and left labia majora, slightly pushing them apart.

6. Wash the anus. Replace the napkin with a new one after each movement from top to bottom.

When conducting intimate hygiene procedures, it should be taken into account that the patient may experience discomfort and embarrassment, therefore it is necessary to act especially tactfully.

7. Place the used napkins in a container.

8. Dry the genitals with blotting movements in the same sequence and in the same direction with dry wipes.

9. Place the used napkins in a container.

10. Remove the vessel, oilcloth, diaper.
11. Straighten the bed linen, cover the patient with a blanket.
12. Remove equipment items from the room.
13. Take off your gloves and put them in a disinfection container.
14. Wash your hands with soap and dry with a towel

Improperly performed toilet of intimate places can cause urinary system infections, diaper rash and bedsores. If redness, swelling, scuffs, wounds, soreness, skin discoloration are detected during the procedure, you should immediately report this to a nurse or doctor for treatment.

## FEATURES OF CARE FOR PATIENTS WITH LIMITED MOBILITY

**Physical (motor) activity** is a type of activity of the human body, in which the activation of metabolic processes in skeletal muscles ensures their contraction and movement of the human body or its parts in space. It can be low if a person consciously or needfully leads a sedentary lifestyle, and high, for example, in sports shifts. Movements can be active (independent independent targeted movements) and passive (dependent movements).

Mobility restriction is observed in elderly, weakened people, people who have suffered a stroke, and those suffering from heart failure, with atherosclerosis of the cerebral vessels, Parkinson's disease, asthenia, depression, arthritis and arthrosis, as a result of injury, after surgery, with pronounced visual impairment, etc.

Mobility restriction is also possible with forced immobilization (fixation).

There are several categories of people with limited mobility, taking into account the ability to self-serve:

- they move independently, self-care is preserved;
- they move with the help of auxiliary means, self-service is preserved;
- they move in orthopedic devices and with outside help only within the ward, a significant limitation of self-service;

- movement within the bed, self-service is minimal;
- motor activity and the ability to self-serve are absent.

There is another division of mobility restriction:

- violation of active movements (passive movements are preserved);
- violation of both active and passive movements.

When providing assistance to people with limited mobility, the caregiver usually has two goals:

- 1) to preserve the mobility and self-care of the patient as much as possible;
- 2) increase motor activity.

Maintaining mobility is an important aspect of care and support. In order for a person to get up, move around, wash, eat and dress on their own, it is necessary to maintain body mobility. In addition, insufficient mobility and physical activity can cause such pathological conditions as muscle atrophy, muscle and joint contractures, pressure sores, osteoporosis, vascular thrombosis, blood pressure disorders, constipation, pneumonia, etc.

To maintain mobility and prevent possible complications, it is necessary to create certain conditions and carry out a number of measures:

- convince the patient of the need to get up, wash, and dress on his own;
- convince the patient of the need to eat and move independently;
- support the patient, help him to regularly perform the exercises prescribed by the attending physician (this is especially important for Parkinson's disease, paralysis, arthrosis).

## **RISK FACTORS FOR THE DEVELOPMENT OF PRESSURE SORES. PREVENTION**

When a person is lying or sitting, the body's weight creates pressure on the skin and soft tissues, which affects their blood supply. The areas directly in contact with the adjacent surface experience the greatest pressure. Poor blood flow to the tissues causes unpleasant sensations and causes the body to change position and move. However, in elderly people, weakened post-stroke patients, and unconscious patients, this natural mechanism is disrupted for various reasons (immobility, impaired innervation of certain areas of the body, decreased pain threshold, etc.). As a result, pressure on some parts of the body and ongoing ischemia lead to damage to the skin and underlying tissues, the development of necrosis.

*In order for a bedsore to form, only two hours are enough.*

If the pressure persists for a long time, the pathological process can spread deep down to the bone. In addition, the causes of tissue damage can be friction and/or displacement during displacement, or when a person is unable to hold the correct position, slides out of bed. The risk is increased in elderly people with atrophic bone and muscles. Injuries are more likely to occur in areas with minimal soft tissue thickness.

The amount of pressure on the skin and soft tissues depends on the weight of the patient and the size of the contact zone between the body and the touching surface. Thus, the surface on which the patient will lie or sit is of key importance for the prevention and treatment of pressure sores. The simplest prevention of pressure sores is body rotations.

Even if an anti-bedsore device is used, it is necessary to encourage people to regularly change positions and turn the patient every two hours.

Types of anti-bedsore devices:

- special beds for patients with high
- body mass index;
- mattresses (made of specialized foam, filled with air or gel, variable pressure, fluidizing beds);
- pillows for patients at risk of pressure sores who are sitting in chairs and wheelchairs;
- pads are additional devices that are placed on the mattress to create an antibedsore effect;
- heel protection is a device that protects the skin on the heels from shear and friction, as well as prevents rotation of the foot.

Ways to effectively support the patient:

1. Use the correct anti-bedsore device:
  - to evaluate its effectiveness on a daily basis
  - use the equipment correctly, do not exceed weight and other restrictions.
2. Protect areas at high risk of developing pressure sores (sacrum, heels), heels should always “float”; the skin should be clean, dry, well hydrated.
3. Document the turns/changes in the position of the patient’s body (repeat it more often if the skin remains red or any defects appear on it).

*In bedridden patients who are in diapers, the risk of pressure sores in the sacrum area increases sharply due to the aggressive humid environment*

It is necessary to remember about the “activation” of the diaper before putting it on the patient. In the package, diapers are in the most compact form, the cellulose of the absorbent layer is packed, it needs to be “fluffed”, to do this, shake, crumple in your hands. Then the diaper will absorb much better.

Degrees of development of pressure sores:

- 1st degree — visible redness of the skin, which does not go away after the cessation of pressure; the area is soft when touched;
- 2nd degree — the appearance of blisters, scuffs, shallow wounds/ulcers;
- 3rd degree — deep damage: necrosis involving muscle tissue and liquid secretions from the wound;
- 4th degree — necrosis of all soft tissues with the formation of a cavity with visible bone damage and tendon damage.

If a red spot/spots is found during the examination of the patient’s skin, then a simple test is performed: press on the spot with your finger for 2–3 seconds, the skin is white — it is not a bedsore, it remains red — it is a 1st degree bedsore.

If a bedsore has appeared, especially of the 2nd-4th degree, then it is necessary to prepare for a long process of caring for the wound surface.

The main goal in the 1–2 degree of bedsore development is to avoid infection of the wound and promote the restoration of microcirculation.

At the 3rd–4th degree, when there are necrotic tissues, all kinds of external creams, ointments are essentially meaningless. Only after removing the dead areas and evaluating the wound surface, a decision is made on external remedies. Sometimes the degrees of pressure sores and the stages of wound healing are confused, but these are different concepts.

## PALLIATIVE CARE

**Palliative medical care (PMP)** is a type of medical assistance to patients with incurable, life-limiting diseases that require the use of methods aimed at getting rid of pain and other manifestations of the disease, regardless of the nosological form, in order to improve the quality of life when other medical possibilities are exhausted.

The word “palliative” itself is derived from the Latin “pallium”. In translation, it means a veil, a cloak, a veil. The origins of palliative care go back to nursing homes, hospices, almshouses, and orphanages. They arose in the Middle Ages at churches and monasteries. Modern PMP developed during the second half of the twentieth century. At first, they talked about her only in relation to cancer patients.

The aim of PMP is to achieve the best possible quality of life for patients and their families.

In 2014, the first WHO global resolution was adopted calling for We call on States to improve access to PMT as one of the main components of the health system. In the Global Action Plan for the Prevention of Noncommunicable Diseases, PMT is designated as a mandatory part of the complex of medical services, and access to opioid painkillers is included among the 25 indicators of the monitoring system for noncommunicable diseases. More than 40 million people in the world need PMT and only 14 % have access to it. The urgency of the problem is steadily increasing with increasing life expectancy and the increasing burden of non-communicable diseases. According to estimates of the Global need for PMT, the number of patients in need of it will increase by 2 times by 2060.

## PRINCIPLES AND PROCEDURE OF PALLIATIVE CARE

PMP is provided to patients in the form of planned medical care:

- longterm PMP — with the nearest favorable prognosis for life, with an estimated life expectancy of more than 1 year;
- shortterm PMP — with the nearest unfavorable prognosis for life, with an estimated life expectancy of no more than 1 year.

PMP is provided by public health hospital organizations and other organizations:

1. In inpatient settings:
  - a) patients in need of short-term PMP — in special clinics for terminally ill people (hospices), palliative care units;
  - b) patients in need of long-term PMP — in nursing hospitals, nursing departments, medical and social care departments.
2. On an outpatient basis — in the offices of the PMP.
3. In the conditions of the day care department, outside health care organizations (at home) — by visiting nursing services, offices with the function of a visiting nursing service, outpatient clinics.

**A hospice** is a medical (medico-social) institution/department where a team of professionals provides comprehensive assistance to a patient who needs relief from suffering — physical, psycho-social and spiritual, associated with a disease that cannot be cured, and it must inevitably lead to death in the foreseeable future (3–6 months).

Hospice and palliative care are not the same thing. Hospice care needs patients in the terminal stages of diseases, when the options for drug therapy have already been exhausted. These are the patients for whom we understand that our efforts will not help prolong life. Such patients certainly need medical care, but it consists primarily in relieving pain syndrome. There is also an emphasis on care and psychological support. Hospices do not treat, but create the most comfortable conditions for people who, as a rule, can no longer be helped. Therefore, hospices are necessary for this category of patients. And palliative care is a serious full-fledged medicine, which is designed mainly for severe patients, but is aimed at stopping certain manifestations of the disease. That is, it is not a fight against the disease, but with its symptoms and complications. Palliative care is often used to return the patient to a curable (treatable) state.

The hospice solves all the problems of an incurable patient, including providing a place to stay in the last days of life and relieving pain attacks. Hospice staff also provide for all other needs of the patient: physical, spiritual, emotional and social. You can get into a hospice by referral from a doctor. The reasons for this are an incurable disease in a severe stage, a pain syndrome that cannot be stopped at home, the inability to be cared for by family members, and so on.

When providing PMP in a hospice and (or) a structural unit, the following are carried out:

- symptomatic treatment of pain, life-threatening conditions and pathological symptoms that aggravate the quality of life of patients;
- providing psychotherapeutic assistance to patients;
- psychological support for patients and their immediate environment, including after the death of patients;
- teaching the patients' immediate environment the rules of their care.

Offices aimed at helping patients with incurable diagnoses are being created at many hospices and hospitals. In them:

- monitor the general health of the patient;
- prescribe medications;
- they issue referrals to inpatient medical institutions;
- refer patients for consultation with doctors;
- they advise;
- carry out measures aimed at improving the emotional state of the patient.

In the conditions of a day hospital, the medical staff conducts the reception of patients, the treatment process, and provides the necessary consultations. If there is no day hospital, it is possible to assign several beds to the analgesic cabin in an ordinary hospital. This form is acceptable only for those patients who, for health reasons, can visit the office of pain therapy themselves, but in severe cases this is not possible.

At home (at home), palliative care can be organized only if the analgesic therapy room to which the patient is referred has its own transport. Home monitoring includes pain relief, care, social and psychological support. This method does not involve the presence of a specialist next to the patient around the clock. Most of the worries still fall on relatives, who sometimes have to leave work to take care of a relative.

Principles of providing PMP:

- accessibility, gratuitousness;
- humanity to the suffering of patients and their relatives, openness of diagnosis, taking into account the principles of medical ethics and deontology;
- an individual approach taking into account the personal characteristics of the patient's condition, his religious beliefs, spiritual and social needs.

When providing PMP, the control of painful symptoms — pain, nausea, vomiting, respiratory disorders and other pathological manifestations — comes to the fore. These are often patients who have various stomas installed — gastrostomy or nasogastric probes, tracheostomy, urinary catheters or colostomy bags and other devices that require professional nursing care. PMP is not synonymous with hospice care, but these are links in the same chain, that is, hospice care is included in the concept of palliative care at its final stage.

## **APPROACHES TO PALLIATIVE CARE**

PMP combines three approaches:

1. Pain relief.
2. Psychological support for the patient and his relatives.
3. Social support.

**Relief of pain and painful sensations.** According to world data, pain and other symptoms that worsen the quality of life are experienced by 55 % of those receiving antitumor therapy, 66 % with generalized forms of cancer, and 80 % in the terminal stage of the oncological process.

The first step in providing care to a patient complaining of pain is to determine the type of pain.

Depending on the mechanisms of occurrence, the following types of pain are distinguished:

1. Nociceptive pain is caused by irritation of multimodal pain receptors due to deformation or damage to tissues. At the same time, the function of sensory nerve fibers (somatic or visceral) is not impaired.

Depending on the localization of the activated nociceptor, there are:

– nociceptive somatic pain (skin, muscles, tendons, bones), which is most often well localized, may be transient or permanent, variable in nature (dull or acute, pressing, pulsating, jerking, drilling, gnawing, bursting, other);

– nociceptive visceral pain (internal organs, organ membranes), which is poorly localized, has a diffuse character (dull, stupor-like, compressing, cramping, pulling, exhausting, other).

2. Nociceptive pain occurs in the absence of obvious signs of tissue damage or somatosensory nervous system. Patients with this type of pain are characterized by increased fatigue, irritability, sleep disorders and visceral organ functions, maladaptive strategies for overcoming pain, which are due to altered reactivity of the brain as a whole.

3. Neuropathic pain is the result of damage to the somatosensory nervous system. The pathophysiological mechanism consists in increased excitability of neurons and spontaneous activity at the site of injury, a cascade of neurochemical and physiological changes in the central nervous system, mainly in the posterior horns of the spinal cord (central sensitization).

This leads to the spontaneous occurrence of pain, hyperalgesia (weak pain stimuli are perceived as stronger) and allodynia (weak stimuli cause pain) in areas adjacent to the injury zone.

By nature, it is described as a superficial burning pain, especially with peripheral lesions; spontaneous shooting or stabbing pain, “like an electric shock”, deep dull pain, there may be numbness.

Symptomatic therapy, which relieves pain attacks caused by the disease, aims to ensure the most satisfactory quality of life with a minimum favorable prognosis. For effective relief of pain, it is necessary to accurately assess their nature, create fighting tactics and ensure proper patient care. For example, with daily severe headaches caused by migraines, self-administration of painkillers can only provoke new attacks. A specialist in palliative medicine, in particular a neurologist, will prescribe the right treatment for the patient, advise a set of measures for physical

rehabilitation, and make up the correct daily routine. The most affordable and easiest way to relieve pain is pharmacotherapy.

Effective pain relief can be achieved by following the methodological recommendations. Principles of therapy:

- clearly define the objectives of therapy before starting treatment;
- choose medications based on the type and intensity of pain;
- prescribe adequate doses of drugs and adjust them in such a way as to achieve pain relief without side effects;
- simultaneous administration of two or more drugs with complementary activity can provide more effective pain relief;
- prescribe drugs for a sufficient period of time (2–4 weeks);
- attach non-drug therapy;
- prescribe long-acting drugs for prolonged pain, for sudden pain — short-acting drugs;
- pain therapy should be associated with other therapeutic effects (treatment of the underlying disease).

**Psychological support for the patient and his relatives.** The treatment of a patient in need of PMT should include care, a responsible approach, respect for individuality, consideration of cultural peculiarities and the right to choose a place of stay. It means:

- expression of sympathy and compassion, attention to all the needs of the patient;
- assistance in solving any problems faced by the patient;
- approach each patient as a person, and not as a “clinical case”;
- respect for the patient’s ethnic, racial, religious and other cultural priorities;
- taking into account the patient’s wishes when choosing a place of stay

Severe illness, hospitalization, surgery, lifestyle changes, possible disability and the threat of death have a negative effect on the psychological state of the patient. The patient is unable to adapt to new conditions of existence, he constantly experiences a feeling of fear, doom, which adversely affects the general condition. Relatives usually also cannot support their loved one psychologically, since they themselves are experiencing stress. PMP involves the work of psychologists both with the patient and with his relatives. Sometimes volunteers participate in this work. Religious rituals can be performed at the request of the patient.

The process of reporting bad news is difficult both for the patient to whom the information is addressed and for the medical staff. In order to make it easier to tell the patient the bad news, special protocols have been developed. The most well-known and recognized is the SPIKES protocol, which helps doctors tell patients about poor prognoses. It talks, for example, about the right choice of place and time for a conversation, about other components of such conversations.

- SPIKES protocol (abbreviated version) negative information messages:
- THE SITUATION. Choosing the time and place to talk to the patient;
  - PERCEPTION. What the patient already knows;
  - CLARIFICATION. How much detailed information does the patient want to know (“Would you prefer to hear detailed information or a brief account of what was discovered?”);
  - INFORMING. Gradually bringing the patient to an understanding of his condition (“I don’t have very good news for you”, “The study showed...”);
  - MONITORING the REACTION, on which the course of further conversation will depend.

The disease affects the whole family. A medical professional may unwittingly cause communication problems in the family if he communicates information only to relatives, but not to the patient, or vice versa.

The difficulty of working with relatives is that they often do not want the patient to know his diagnosis, they believe that it will be even harder for him, this information can kill him. However, the law requires notifying the patient of his diagnosis, the person will still understand what is happening to him. In addition, the patient has his own life, and perhaps he wants to have time to solve some personal issues, including with relatives, assess his chances and live what is given now. That is why it is so important to inform the patient about his diagnosis

Meeting with the patient and his relatives at the same time is usually preferable, as it carries a greater therapeutic effect. Relatives also go through the stages of accepting the disease. The phases of the personal response of the patient’s relatives to cancer are the same as his own, because there is an identification of himself with his native person. Being in the shock phase, family members often experience a conflict between their own fear and the need to support the patient. It’s not for nothing that they say that living next to a seriously ill person is probably even more difficult than being ill yourself.

The stage of depression in the patient’s relatives tends to repeat after the burial of a loved one.

**Social support.** PMP includes social support for the patient’s family and himself. After all, psychological problems are also exacerbated by the awareness of social difficulties caused by the costs of care and treatment. Many patients have financial problems, some need to improve their living conditions, but very few are aware of the social benefits available to them. Social service specialists are required to conduct a study of the patient’s social problems, develop a social rehabilitation plan together with doctors, inform the patient about his rights and possible benefits and help them receive them.

## SELF-CONTROL OF TOPIC ASSIMILATION

### 1. The main signs of clinical death are:

- a) a thready pulse in the carotid artery;
- b) pupil dilation;
- c) the absence of a pulse in the carotid artery;
- d) absence of a pulse on the radial artery;
- e) cessation of breathing or agonal type breathing.

### 2. Indications for cardiopulmonary resuscitation are:

- a) only clinical death;
- b) agony and pre-diagonal state;
- c) all suddenly developed TS;
- d) clinical death and biological death.

### 3. The basic principles of assistance in cardiopulmonary resuscitation:

- a) to ensure the free passage of the respiratory tract;
- b) perform a ventilator and restore breathing;
- c) perform an indirect (closed) heart massage and restore blood circulation;
- d) catheterization or puncture of a vein.

### 4. The chances of saving the victim will be highest if cardiopulmonary resuscitation is performed within the first:

- a) 15 minutes;
- b) 10 minutes;
- c) 6 minutes.

### 5. To ensure the patency of the respiratory tract, it is necessary:

- a) turn your head to the side;
- b) straighten the head in the cervical spine;
- c) tilt your head back, push your lower jaw forward, and remove mucus from your mouth with a napkin.

### 6. During ventilation, it is necessary to tilt the victim's head back:

- a) to remove a foreign body from the upper respiratory tract;
- b) to ensure the patency of the respiratory tract;
- c) to create a tightness between the mouth of the resuscitator and the victim.

**7. The triple intake of P. Safar on the respiratory tract includes:**

- a) tilting of the head, removal of the mandible and insertion of the fetus;
- b) removal of the lower jaw, opening of the mouth and toilet of the oral cavity;
- c) tilting back the head, removing the lower jaw and opening the mouth.

**8. The ratio between air inhalations and chest compressions during a complex of cardiopulmonary resuscitation with one resuscitator:**

- a) 1 inhalation : 5 compressions;
- b) 1–2 breaths : 8 compressions;
- c) 2 breaths : 30 compressions;
- d) 2 breaths : 15 compressions.

**9. Exclude the action from the complex of the “Triple Safar intake” in case of an injury to the cervical spine:**

- a) extension of the head;
- b) extension of the lower jaw;
- c) opening the mouth.

**10. Early signs of biological death include:**

- a) dilated pupils, pupils that do not respond to light;
- b) cadaverous spots;
- c) rigor mortis;
- d) corneal opacity;
- e) pupil deformity.

**11. Pressing on the sternum during indirect heart massage is performed:**

- a) the entire palm surface of the hand, without bending the arms at the elbows;
- b) with the wrists, without bending the arms at the elbows;
- c) wrists, bend your arms moderately at the elbows.

**12. The displacement of the sternum to the spine during indirect heart massage in an adult should be:**

- a) 1.5–2 cm;
- b) 3–4 cm;
- c) 4–5 cm;
- d) 7–8 cm.

**13. The earliest sign of the effectiveness of cardiopulmonary re-animation is:**

- a) constriction of the pupils, the appearance of their reaction to light;
- b) the appearance of a pulse on the carotid artery;
- c) an increase in blood pressure to 60–70 mmHg;
- d) the appearance of respiratory movements.

**14. The irreversible stage of dying is:**

- a) clinical death;
- b) agony;
- c) biological death;
- d) predagonia.

**15. When performing indirect heart massage in adults, the hands should be positioned:**

- a) in the upper third of the sternum;
- b) at the border of the upper and middle third of the sternum;
- c) at the border of the middle and lower third of the sternum;
- d) in the fifth intercostal space on the left.

**16. Objective criteria for stopping cardiopulmonary resuscitation are:**

- a) inefficiency of cardiopulmonary resuscitation;
- b) the appearance of signs of clinical death;
- c) lifeguard fatigue;
- d) the appearance of cadaverous spots.

**17. The purpose of indirect heart massage:**

- a) to restore the activity of the heart;
- b) restore the patency of the respiratory tract;
- c) restore blood circulation.

**18. Indications for indirect heart massage:**

- a) clinical death;
- b) biological death;
- c) acute poisoning;
- d) hyperthermic syndrome.

**19. The presence of a heartbeat in intensive care practice is most appropriately determined by palpation:**

- a) a heartbeat in the area of the fifth intercostal space;
- b) carotid artery;
- c) radial artery;
- d) the temporal artery.

**20. List the signs of the effectiveness of resuscitation measures:**

- a) the appearance of pulsation on the carotid and radial arteries;
- b) pupil constriction;
- c) restoration of blood pressure;

- d) reduction of pallor, cyanosis;
- e) increase in blood pressure;
- f) restoration of independent breathing;
- g) dilation of the pupils.

**21. What is the purpose of providing PMP:**

- a) measures for the prevention, diagnosis, and treatment of diseases;
- b) improving the quality of life of incurable patients;
- c) treatment of patients until full recovery.

**22. Where PMP can be provided:**

- a) at home;
- b) in sanatorium and wellness centers;
- c) on an outpatient basis;
- d) in stationary conditions.

**23. PMP components:**

- a) high-tech medical care;
- b) psychological assistance;
- c) rehabilitation measures;
- d) medical care and care.

**24. Tasks of the PMP:**

- a) adequate anesthesia and relief of other physical symptoms;
- b) the implementation of euthanasia;
- c) psychological support for the patient and his relatives;
- d) hospitalization of patients in specialized social care institutions.

**25. Hospice care is:**

- a) a variant of euthanasia;
- b) philosophical teaching;
- c) the form of social assistance to the population;
- d) one of the forms of PMP organization.

**26. In stationary conditions, PMP is provided in all medical organizations, except:**

- a) visiting hospice-based patronage service;
- b) nursing homes;
- c) PMP departments in the city hospital;
- d) hospice.

**27. Who can provide PMP:**

- a) medical workers of any specialty;
- b) medical workers with higher medical education;
- c) medical workers with secondary medical education;
- d) health workers who have been trained to provide such assistance.

**28. How many approaches are allocated for the provision of PMT:**

- a) 1;
- b) 2;
- c) 3;
- d) 4.

**29. Factors contributing to the formation of pressure sores:**

- a) mental trauma;
- b) prolonged stay of the patient in one position;
- c) protein nutrition;
- d) urinary and fecal incontinence.

**30. Possible localization of pressure sores on the posterior surface of the trunk:**

- a) occiput;
- b) shoulder blades;
- c) brushes;
- d) the sacrum.

**31. The prevention of pressure sores contributes to:**

- a) change of body position;
- b) drinking regime;
- c) diet.

**Answers:** 1 — b, c; 2 — c; 3 — a, b, c; 4 — c; 5 — c; 6 — b; 7 — c; 8 — c; 9 — a; 10 — c, d; 11 — b; 12 — b; 13 — b; 14 — b; 15 — b; 16 — a; 17 — a, b; 18 — a; 19 — b; 20 — a, b, c, d, f, g; 21 — b; 22 — a, c, d; 23 — b, d; 24 — a, b; 25 — d; 26 — a; 27 — d; 28 — b; 29 — b; 30 — a, b, d; 31 — a.

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