

MINISTRY OF HEALTH PROTECTION UKRAINE
HIGHER STATE EDUCATIONAL ESTABLISHMENT OF UKRAINE
„ UKRAINIAN MEDICAL STOMATOLOGICAL ACADEMY”

DEPARTMENT OF ONCOLOGY



It is ratified on the methodical conference
Protocol №1 from August, 30 2018
year. Manager of department
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METHODICAL POINTING
FOR INDEPENDENT WORK OF STUDENTS
DURING PREPARATION TO PRACTICAL EMPLOYMENT

<i>Educational discipline</i>	<i>Palliative help</i>
<i>Module №</i>	<i>I</i>
<i>Rich in content module №</i>	<i>I</i>
<i>Theme of employment</i>	Oncologic patients have treatment of pain syndrome
<i>Course</i>	<i>VI</i>
<i>Faculty</i>	<i>Medical</i>

THEME: ONCOLOGIC PATIENTS HAVE TREATMENT OF PAIN SYNDROME

1. Actuality of theme.

From data of Committee of VOOZ in relation to anaesthetizing (at cancer), in 30-50% oncological patients pain is a basic symptom, but only half from them get the effective anaesthetizing. Taking to account that growth of oncological disease will be saved, in a prospect, on the prognosis of VOOZ, about 90% patients which are on an account, will need only palliative therapy and, including, anaesthetizing.

In the program VOOZ in relation to a fight against a cancer problem treatments sick with a chronic pain syndrome is one of priority tasks of modern oncology:

- creation of the global system is for distribution of knowledges about the methods of diminishing of pain;
- there is revealing to the sick people and their families circumstance that it almost always can win over pain;
- introduction to the program of studies of doctors and medical sisters of the proper discipline;
- complete teaching of methods of anaesthetizing in standard manuals in relation to the conduct of patients with a cancer;
- application of acesodynes in the hospitals of general type, centers of health protection and even in home terms, but not only in the specialized oncologic centers;
- a revision of state legislations is in industry of medications with that a patient with a cancer accessible necessary for anaesthetizing preparations were;
- increase of off-budget money assignments from state and private sources for maintenance of the local and national programs in relation to anesthetic therapies.

2. Concrete educational aims:

To know:

Clinical classifications of chronic pain syndrome:

- a) pain, caused actually a tumor process;
- b) pain, predefined complications of tumor process and paraneoplastic syndromes;
- c) pain, caused treatment;
- d) neurological pain;
- e) causalgia (burning pain).

Able:

1. To conduct anamnesis of pain.
2. Estimation of intensity of pain.
3. Estimation of the psychological state of patient.
4. Estimation of quality of life.
5. Estimation of efficiency of application of methods of anaesthetizing.

6. Exposure of narcotic dependence.

3. Table of contents of theme.

Clinical classifications of chronic pain syndrome

The most more frequent reasons of pain is: tumor process, consequences of progress of disease, complication of the special treatment, accompanying diseases.

Pain, caused actually a tumor process

it is defeat of bones; compression of nervous structures (interlacements, barrels, counterfoils of spinal cord, but other); infiltration and destruction of nervous structures; a germination of tumor is in soft fabrics (infiltration, compression, destruction); occlusion or compression of blood vessels; increase of intracranial pressure; muscular spasm, predefined the defeat of bones; occlusion of bilious and urinoexcretory ways; obstruction or compression of lymphatic vessels.

Pain, predefined complications of tumor process and paraneoplastic syndromes

- it is Pain, connection with asthenia.
- constipations; bedsores; trophic ulcers.
- are the Pathological breaks (bones, spine); necrosis of tumor is with inflammation, infecting, formation of ulcers and cavities of disintegration; perifocal inflammation is with infecting, formation of ulcers and cavities of disintegration; inflammation and infecting of remote organs is in connection with violation of outflow (urinary ways, channels of glands of external secretion, bilious ways, perforation of organs, peritonitis; but other); an arterial and venous thrombosis is on the basis of compression (ischemic pains, thrombophlebitis).

Pain, caused treatment

- Polimioziti; canceromatosicel sensory neuropathy; osteoathropathy.
- Complication of surgical treatment: pain in the area of postoperative scar, phantom pains, formation of joints in serosal cavities, was swollen extremities after lymphadenectomy.
- Complication is after a chemotherapy: stomatitis, polyneuropathy, generalization myalgia, symmetric arthralgia, aseptic necroses.
- Complication is after radial therapy: radial damages of skin, hypoderm, bones, organs of gastroenteric highway, urinary ways, spinal cord; φιδροз of neighbours fabrics with the second trauma of nervous structures, plexitis, neuralgia, myelopathy.

Diagnostics of chronic pain syndrome

For diagnostics of chronic pain syndrome it is necessary to utilize simple, popular, noninvasion methods which do not require difficult researches and does not deepen the state sick.

Anamnesis of pain. Duration, localization, intensity, character of pain, is studied, efficiency of methods analgesias which was used, dependence of pain on other factors.

Review sick. It is necessary to estimate character and prevalence of tumor process; reasons of pain are possible; physical, neurological and psychical status of patient.

Estimation of intensity of pain. For this purpose apply the simple and effective 5-ball scale of verbal estimations (SHVO), or by sight analog scale (YOUR).

Estimation of the psychological state of patient: apathy, depression, fatigue, nervousness, insomnia, and other. These factors reduce the threshold of algesia and, thus, strengthen pain. Therefore their exposure and treatment is instrumental in the increase of general efficiency of the combined therapy.

Estimation of quality of life – allows to find out reasons which influence on the general state of patient. For the estimation of quality of life it is necessary to utilize different criteria which allow to estimate all of sides of life sick, for example, criteria, made to order IASP: general bodily condition; functional activity; spirituality; social adaptation; possibility of self-service; communicability and intrafamily relations; sexual satisfaction; estimation of results of treatment; plans are on the future; professional activity; efficiency of anaesthetizing.

Estimation of efficiency of the applied methods of anaesthetizing. It is very important to set what preparations, in what dosages and at what mode of introduction, gave the best effect; what complications were marked at introduction those or other preparations. It is very important to distinguish the displays of indirect action of preparations and symptoms of disease. The most more frequent complications are at application of unnarcotic analgetics: irritation and erosion of mucus gastroenteric highwayallergic cutireactions. For narcotic preparations more characteristic: nausea, vomit, somnolence, weakness, decline of appetite, lock, dizziness, dryness, in a company, disorientation, hallucinations, difficulties of urination, skin itch.

Estimation of results of the special antitumor's therapy. Application of different methods specially antitumor's therapy (chemotherapy, radial therapy, hormonal treatment) with a palliative purpose can result in diminishing of intensity of pain and treason of tactic of treatment.

Accompanying diseases must be taken into account from the point of view their possible sharpening or development of complications, which can arise up as a result of application of analgetics and other preparations which are used for symptomatic treatment.

The exposure of narcotic dependence which arose up for a patient allows correctly to correct treatment taking into account this circumstance. It is needed to mean that **development of narcotic dependence can not be examined as reason of declension of narcotic analgetics for an incurable patient with a chronic pain syndrome.**

As a result, on the basis of information of inspection it is necessary to formulate **the nosologic diagnosis of chronic pain syndrome** which includes:

type of pain, his localization, intensity and reason of origin, accompanying complications and psychical violations. For example: «a peripheral cancer of apex left is lung, which germinates in a pectoral wall. A heavy chronic neurological pain syndrome is as a result of compression of the brachial plexus with accompanying depression».

Methods and facilities of treatment of chronic pain syndrome

Modern medicine has different facilities of treatment of chronic pain syndrome. On the average, good results of treatment of pain can be accomplish in 85-99% patients.

Methods of treatment of chronic pain syndrome

Etiologic (special antitumorous) therapy can be the effective component of the combined treatment of pain syndrome. These methods of treatment are appointed at presence of testimonies, *collectively*, with obligatory participation of specialists-oncologists.

From **surgical methods** used for this purpose: palliative and sanitary resections of organs and fabrics, nephrectomy, draining of cavities (laporo- and thoracocentesis) and hollow organs (gastro- and enterostomy, colonotomy, cystostomy, and other), surgical immobilisation.

Palliative radial therapy is used with the purpose of anaesthetizing in 15-25% incurable patients: at the metastatical defeat of skeleton, soft fabrics, cerebrum, obstruction of respiratory tracts, digestive highway and urinoexcretory ways. Radial therapy appears effective in 80% patients which suffer from pain as a result of metastatical defeat of bones.

Chemogormonal therapy is used with the purpose of degrowth tumor and liquidation of compression of nervous trunks.

Local pharmacotherapy of pain includes: sub- and epidural introduction of opioids; methods of protracted katheterization of epidural space or liquors system of cerebrum; local application of local anesthetic; sacral anaesthesia at pelvic pains and others. It is needed to mark that methods are mentioned rarely used in practice from reason them technical complication and high-purity of complications. Their applications are more justified at presence of non stop of pain syndrome, as a rule, in stationary terms.

Blockade of nerves by anesthetics and neurolitical (chemical) preparations or physical methods – for breaking of nervous impulses and oppression of excitation of ceptors. For the blockade of nerves in a number of cases can bring application over of local anesthetics to the protracted effect: at presence of pain infiltrates, defeat of joints and ligamentous apparatus, muscular crampy.

For a permanent blockade chemical neurolisicals is utilized (alcohol, phenol). Their introduction causes destruction (denaturizing of albumen) of nervous fibres and can be accompanied different complications (neuritises, necrosises of fabrics and other). Therefore the chemical blockade of nerves is used only in those cases, when ordinary pharmacotherapy is quite ineffective. An

obligatory condition is a previous (trial) blockade by local anesthetic, if it gives an effect, application of chemical or physical innervation is possible.

For today there are safe and un toxic methods **of electrostimulation analgesia**: transskin, epidural, trancaudal electrostimulation of nerves. However, these methods are effective only at the pain syndrome of weak and middle intensity.

Psychotherapy methods in treatment of pain are auxiliary and directed on the increase of threshold of algesia due to the improvement of mood sick, removal of depression and fear. It is known that the threshold of pain goes up in the case of insomnia, fatigue, alarm, fear, anger, depression, boredom, psychical isolation and abandonment. In that time, firmness to pain grows after valuable sleep, at presence of company, comprehension, understanding, to devote to favourite business. The medical and social rehabilitation of patient, increase of his activity has a large value also. The use of hypnosis and autogenous training is possible in a number of cases.

Pharmacotherapy of pain

By the basic method of anaesthetizing for oncologic patients Committee of experts of VOOZ is acknowledge **system pharmacotherapy**. In 1986 year of VOOZ the three-step chart of anaesthetizing is offered at a disease on a cancer. It is recommended to conduct treatment of pain syndrome after such chart:

- unnarcotic analgetic + adjuvant facilities;
- weak opioids are as a codeine + adjuvant facilities ;
- strong opioids (groups of Morphinum) + adjuvant facilities.

Antipain therapy needs to be begun at appearance of the first signs of pain. Analgetic is appointed through the identical intervals of time, not expecting proceeding in pain, with the purpose of providing of the permanent anaesthetizing. Adjuvant and symptomatic preparations must be appointed severely after testimonies.

After a patient permanent control is set, especially at the beginning of treatment. A supervision with the purpose of correction of treatment and prophylaxis of possible complications is also needed in subsequent.

Analgetics of peripheral action

The action of peripheral **анальгетиків** is, mainly, with oppression of formation of prostaglandins and weakniss of sensibilization action of bradikinin receptors.

Unnarcotic analgetics:

- **aspirin**;
- **paracetamol**;
- **spesmoleks**;
- **analgin**;
- **baralginum**.

Preparations of this group can with success be used for treatment of pain syndrome of easy and middle degree of expression.

No-steroid antiinflammatory preparations have expressed analgetics and antiinflammatory action, repress aggregation of thrombocytes. They are effective at the pain syndrome of weak and middle intensity. The basic mechanisms of action is blocking of cyclooxygenase and oppression of synthesis of prostoglandins, which co-operate with on ciceptors. These preparations are rotined at the metastatics defeat of skeleton, tumors of soft fabrics, visceral pains. The most known preparations of this group is:

- **diklofenak;**
- **indomethacinum;**
- **naproksen;**
- **ketanol;**
- **ketorelak.**

Adjuvant's facilities

By adjuvant and symptomatic facilities it is possible to strengthen operate analgetic, and also to prevent or stop different symptoms, accompanying a chronic pain syndrome.

Glyukokortikoid – due to their antiinflammatory and antifilling out action, appear effective at head pains which are caused the increase of intracranial pressure; at pains as a result of distention capsule of liver and spleen; at the compression of nerves and spinal cord; tumors at peritoneal space and small pelvis; violations of lymphflow, infiltrations of soft fabrics of trunk and neck; bone metastases. In addition, glucocorticoids promote an appetite and, in a number of cases, cause small euphoria, instrumental in the improvement of mood. Used more frequent all:

- **dexamethazonum;**
- **methylprednisolonum;**
- **depomedrol;**
- **solumedrol;**
- **dekcaven;**
- **deksason;**
- **fortekerotin.**

Anticonvulsive preparations help at the expressed neurological cramp pains:

- **karbamasepin;**
- **klonasepam.**

Psychotropic facilities (tranquilizers, neuroleptics, antidepressants) are the obligatory component of the combined treatment of chronic pain syndrome, so as different psychical disorders arise up in most patients. Tranquilizers appoint with a purpose the removal of fear, anxiety, alarm, at parahypnosis:

- **diasepam;**
- **fenasepam;**
- **tasepam;**

- **rudotel;**
- **baklofen.**

Antidepressants promote efficiency of treatment of chronic pain syndrome, the action of analgetics:

- **amitpintilin;**
- **imipramin.**

Neyroleptiki apply, mainly, at accompanying psychopathic disorders and heavy pain syndrome which badly by opioids:

- **galonefusol;**
- **tiserein.**

Symptomatic facilities

Different symptomatic medicinal preparations are used in palliative medicine for a prophylaxis and stop symptoms which arise up as a result of treatment, or accompanying ran across disease.

Spasmolysants are rotined at visceral and cramp pains, predefined the spasm of smooth musculature. **Kholinolitiki (atropine, Platyphyllum, Scopolaminum)** is used and the combined preparations (**Baralginum, spasmalgin and other**)

Antihistaminics (Dimedrolum, Diazolinum, Pipolphenum, Suprastinum) diminish an itch, was swollen dermahemia, have weak spasmolytic, sedative and somnolent action (**Dimedrolum, Pipolphenum**).

Ranitidin or cimetidin appoint simultaneously with glucocorcid and nesterods antiinflammatory preparations for the prophylaxis of ulceras complications from one side a gastroenteric highway.

Antivomit facilities are used for a prophylaxis and removal of nausea and vomit of different genesis, which develops as a result of chemotherapy, indirect action of medicinal preparations, distribution of tumor process and his complications.

Purgative preparations are for oncologic patients. Development of locks considerably worsens the state of patients and can result in an excrement obstruction and intestinal impassability, liquidation of which presents a serious problem often. Laxatives apply for patients with chronic constipations, by violation functions of intestine of central character, which accept opiatics.

Antidiarrhoe preparations appoint at diarrhea of different genesis, which can be aftermath of hormonochemotherapy, accompanying medical therapy or radial treatment.

Diuretiks is rotined at edemata, lymphogenesis stand, multiplemeaning, edemata of brain. In order to avoid development of water-electrolyte violations, diuretics appoint short courses in small doses, combining with the reception of **asparcam**. Advantage needs to be given potashsaving preparations: **veroshpiron** and diuretics of the combined action – **triampur**.

Bisfosfonatics – comparatively new group of preparations which slow development of osteoporosis and promote, in connection with analgetics, to diminishing of pain at bone metastases: **calcitoninum, bonefos**.

Antihemorrhagic facilities are used for a prophylaxis treatment of bleeding, related to the basic disease or is the result of development of haematological complications of medicinal therapy: **vicasol**. Natively, at the **vloundig** bleeding, it is possible with success to utilize **taxocomb, beruplast, hemostatic sponge**.

Different medications of nosotropic therapy of chronic pain syndrome.

The row of preparations which do not have a line of analgetics action finds application in the treatment of chronic pain syndrome, but able to promote general anaesthetic an effect due to influence on the different nosotropics links of difficult mechanism of origin of pain.

The agonists of adrenalin α_2 receptors (clonidin, metildopa and other) are instrumental in oppression of displays of causalgia and potentiate the action of opioids, even at development of tolerance to them.

Blocks of the calcium ductings (nifedinin, nimodinin) can be utilized as facilities of therapy of chronic pain syndrome.

The antagonists of excitant amino acid in an experiment showed the efficiency at heavystopping neurological pain. In clinical practice at a hyperalgesia and alodins from preparations of this group used **ketamine and potashsol**.

Analgetiks of central action

Veritable opiatics, Morphinum and his analogues is derivatives of opium, appoint, in obedience to recommendations of Committee of experts of VOOZ (1986) at strengthening of pain syndrome from weak to moderate and strong. Weak **opiatics as a codeine** is appointed at first, then – strong as a morphinum. **The committee of VOOZ acknowledges on anaesthetizing, that at the uncontrolled increase of dose morphinum can be instrumental in senortof life sick.** At the protracted setting of morphinum and other opiatis appears звикання, but **development of passion to the drug nowise can not be reason of declension of preparation for a patient with a chronic pain syndrome.** For today monotherapy can not be considered the large doses of morphinum by the modern method of fight against pain, combined pharmacotherapy is needed with the use of all of spectrum of symptomatic facilities.

Analgetiks of central action:

- omnoponum;
- misdelivering;
- tromadol;
- buprenorfin.

Literature is made to order:

a) Basic

1. Bondar G.V. Palliative medical: is for stud. V-VI of courses, / Bondar G.V., Vitenko I.S., Popovich O.Yu. – Doneck, 2004. – 80 c.
2. Lectures for clinical oncolodgy. Bondar G.V. – Lugansk, 2009. – 580 p.
3. Onkologiya familiary doctor/ Bashtan V.P., Zhdan V.N., Sheleshko P.V. – Poltava, 2005. – 100 p.

b) Additional

1. Oncology. Under editorship of B.T. Bilinskuy, Yu.M. Sternuk, I. In. Shparik. Is Kyiv: Health, 2004. – 527 p.

Materials are for self-control

1. To ground actuality of theme of employment.
2. Clinical classification of pain syndrome.
3. Diagnostics of pain syndrome.
4. Methods and facilities of treatment of chronic pain syndrome.
5. Pharmakoterapiya of pain.
6. Analgetiks of peripheral action.
7. Symptomatic facilities.
8. Analgetiks of central action.