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Treatment of chronic pain in oncology: cooperation between the oncologist and psychooncologist

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ABSTRACT

The aim of this work is to present the problem of chronic pain in neoplastic disease as a situation requiring diagnosis and interdisciplinary treatment. The phenomenon of chronic pain, its types, and causes are discussed. A discussion was held on appropriate scales for measuring pain intensity. Pharmacotherapy and psychotherapy were primarily presented among the discussed treatment methods, and issues related to other methods of interactions related to the treatment of patients with chronic pain in the course of neoplastic disease were discussed. The key aspect of the article is to draw attention to the implementation of multi-specialist treatment of chronic pain, including personalised solutions and the accommodation of the most favourable form of therapy and the methods of its implementation.

Key words: chronic pain, pain treatment, pharmacotherapy, psychotherapy, oncology, psychooncology

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Introduction

The incidence of cancer is constantly growing both in the world and in Poland. Malignant neoplasms are the second cause of death in Poland after cardiovascular disease. It is estimated that one in four people will die from cancer [1]. In more than half of patients cancer is in an advanced stage at the time of diagnosis and is associated with the presence of clinical symptoms.

In addition to anti-cancer therapy the proper diagnostics and treatment of pain is one of the key aspects of oncological care.

Literature data show that during radical treatment, as many as 30–50% of patients experience pain, and in advanced stages this problem affects over 80% of patients [2].

Pain should be considered as a psychosomatic phenomenon, which is defined as a subjective, multi-area experience that is individually felt by the person. According to the International Association for the Study of Pain (IAPS) and the World Health Organisation (WHO), pain is "an unpleasant sensory and emotional sensation caused by actual or potential tissue damage". This definition includes sensory (related to pain perception) as well as emotional components (related to mental reactions to a given painful stimulus). The emotional component is subjective and, as mentioned earlier, it has an individual dimension for a given patient [3, 4].

The following factors characterise pain as a holistic experience:

— physiological symptoms of pain (physical dimension);
— the impact of pain on the patient's functioning and self-care activities (functional dimension);
— the impact of pain on emotions as well as the quantity and quality of social relations (the psychosocial dimension);
— understanding the meaning of suffering, purpose of life, worldview, life attitudes (spiritual dimension);

— history of pain experiences, current experience of pain, anxiety problems, adaptation to cancer (behavioural dimension) [4].

Pain is a manifestation of cancer, occurring at various stages of disease, starting from being the first symptom of the developing disease (primary tumour or metastases), pain occurring during anti-cancer treatment (oncological surgery, chemotherapy, radiotherapy, and others), up to pain at the end-stage of the disease. Pain can also occur during remission or in cured patients as a consequence of previous causal treatment [5, 6]. The results of a meta-analysis conducted in 2016 and based on the data from over 66,000 people showed that 39.3% of people experienced pain associated with the treatment, 55% suffered from pain during cancer treatment, and 66.4% suffered from pain in the advanced, metastatic, or terminal phase of the disease [7]. Scientific analyses performed in the last two decades suggest an improvement in the pharmacological adequacy of analgesic therapy. However, almost 30% of patients still do not receive analgesics adequately to the intensity of pain [8].

In the current, 11th version of the International Classification of Diseases (ICD), chronic pain is defined as persistent (continuous) or recurrent (intermittent, episodic) for more than three to six months. It does not play the role of warning physiological nociception in acute conditions. It is estimated that chronic pain affects about 20% of people worldwide [6]. In response to this issue, new categories of chronic have pain emerged, including:
— chronic primary pain;
— chronic cancer pain;
— chronic post-traumatic and post-operative pain;
— chronic neuropathic pain;
— chronic headache and mouth and facial pain;
— chronic visceral pain;
— chronic musculoskeletal pain [6].

Types and causes of cancer pain

The Polish Society for the Study of Pain (PTBB) classifies pain in cancer according to the cause and distinguishes the following types of pain:
— pain caused by the presence of primary tumour/metastases;
— pain caused by the diagnosis and treatment of cancer;
— pain syndromes indirectly related to cancer or not related to oncological disease;
— breakthrough pain [9].

In turn, the European Society for Clinical Oncology (ESMO), among the causes of non-tumour-related pain, additionally distinguished pain occurring in convalescents [10].

Cancer pain can also be categorised by the type of ailments: neuropathic pain (non-receptor, pathological) and nociceptive pain (receptor), which consists of somatic and/or visceral pain [10].

Pain caused by the presence of a tumour

The pain caused by the presence of the tumour is usually mixed and consists of several types of pain with different pathomechanisms (i.e. neuropathic, somatic, and visceral).

Somatic pain affects 70–80% of patients with existing tumour mass and it may be the result of irritation of nerve endings (nociceptors) or lowering their excitability threshold in the case of inflammation around tumour tissues and consequent release of inflammatory mediators (e.g. prostaglandins, histamine, bradykinin) [11, 12]. Somatic pain derives from bones, joints, muscles, skin, or connective tissue. Pain from soft tissues is the result of occlusion of blood and/or lymph vessels by the tumour and infiltration of soft tissues and serous membranes. On the other hand, bone pain arises from the invasion of the bone marrow by the tumour, which leads to an increase in intraosseous pressure, periosteal distension, and proliferation of nerve fibres in the bone marrow and periosteum as a consequence of nerve growth factor (NGF) activity. Metastases in the bones can cause local or root pain [9]. Somatic pain is acute pain, strictly located, which increases in direct proportion to the deterioration of the local condition [13].

Visceral pain caused by the presence of a tumour occurs in 30% of patients [11]. It is described by patients as aching, colic, and diffuse pain. Visceral pain arises in the organs of the digestive system due to stretching of the organ's capsule, compression or pulling through the tumour tissue of ligaments, blood vessels, mesentery, pleura, or peritoneum. Inflammatory mediators, as in the pathomechanism of somatic pain, can stimulate visceral nociceptors. In addition, infiltration of nerve fibres and vessels that supply visceral organs is responsible for the development of diffuse pain [9, 11].

Neuropathic pain due to tumour expansion occurs in 30–40% of patients and shows paroxysmal and stabbing features [11]. It is accompanied by breakthrough pain, that is short and very strong. It can also be characterised by generalised dysaesthesia, hyperalgesia, and allodynia. Depending on primary tumour or metastases location neuropathic pain is divided into peripheral or central. Neuropathic pain is the result of pressure or damage of peripheral nerves or nerve plexuses. Peripheral nerve injury is a signal for the parent's neuron body in the spinal ganglia to activate gene expression and production of protein particles transported to the site of injury. As a result of biochemical changes, new receptors are formed, which are the source of stimuli responsible for the formation of paroxysmal pain. In addition, nerve damage leads to pathological synaptic connections between different types of nerve fibres, contributing to the incorrect sensation of stimuli (analogous to allodynia, hy-

peralgesia, dysaesthesia) [12]. In addition, neuropathic pain occurs in paraneoplastic syndromes (e.g. peripheral sensory polyneuropathy, Lambert-Eaton myasthenic syndrome [LEMS], paraneoplastic myopathy, cerebellar degeneration, paraneoplastic encephalitis) [9].

Pain caused by diagnostics and anticancer treatment

Approximately 20% of cancer patients experience iatrogenic pain caused by chemotherapy, radiotherapy, hormone therapy, corticosteroid therapy, targeted therapy, or surgery [9–11]. Iatrogenic pain is usually neuropathic in nature because it is the result of nerve damage, leading to defective perception of pain in the peripheral or central nervous system [13].

Peripheral neuropathies are most often caused by the use of anti-cancer neurotoxic drugs (vincristine, vinblastine, vinorelbine, paclitaxel, docetaxel, platinum derivatives). Neuropathic pain after cytotoxic drugs is often described by patients as tingling, numbness, stinging, or stabbing pain. During hormone therapy with antioestrogens and aromatase inhibitors, side effects may appear in the form of osteoarticular pain [10].

Granulocyte colony-stimulating factors (G-CSF) most commonly induce bone pain during chemotherapy [9]. However, as a result of high doses of corticosteroids in premedication for chemotherapy or symptomatic treatment during palliative care, there is a risk of developing painful inflammatory changes of the skin and oral mucosa, infection, peripheral neuropathy, sterile osteonecrosis (Calve's, Legg's, and Perthes' disease), osteoporosis, and osteonecrosis [9, 10, 13].

Surgical procedures may result in damage of the peripheral nerves and consequently persistent pain after mastectomy, thoracotomy, phantom pain, stump pain. In turn, radiotherapy can lead to fibrosis of the brachial or lumbar plexuses, myelopathy, and radiation-induced necrosis. In addition, radiotherapy is responsible for the occurrence of chronic inflammation of the mucous membranes of the mouth, throat, oesophagus, intestines, and anus [9, 10].

In addition to pain of iatrogenic origin, there are also — often overlooked — pain complaints associated with the diagnosis and invasive procedures, developed by the ESMO classification of non-tumour-related pain, distinct categories for iatrogenic pain and severe procedural pain. Acute pain syndrome may be a complication after puncture, biopsy, endoscopy, angiography, and other diagnostic interventions [10].

Pain in convalescents is another, separate category of pain symptoms defined by the ESMO. It may be a consequence of procedures performed as part of observation or persistent side effects of the therapies used [10].

An example of a group of patients particularly exposed to persistent iatrogenic pain are women after radical surgical treatment due to breast cancer and supplementary chemotherapy with paclitaxel and radiotherapy to the chest wall area.

Other pain syndromes in cancer patients

The category of other pain syndromes most often concerns ailments unrelated to cancer and anticancer treatment (e.g. diabetic neuropathy, fibromyalgia, angina pectoris, tension and migraine headaches, osteoarthritis, *Herpes* virus infection and subsequent postherpetic neuralgia, acute thrombotic syndromes, immobilisation leading to activation of trigger points and myofascial complaints, and others). The used anti-cancer treatment may in these situations deepen the pre-existing pain [9, 10].

Breakthrough pain

Breakthrough pain is an episodic and transient exacerbation of pain in patients successfully treated with opioids due to cancer pain. The Polish Society for the Study of Pain (PTBB) divides pain into three categories:

— spontaneous pain caused by unknown aetiological factors;
— incidental pain, which may be voluntary (e.g. when attempting to move) or involuntary (e.g. colic pain);
— procedural pain that arises during care, diagnostic, or rehabilitation procedures [9].

Breakthrough pain, regardless of the cause, is characterised by a rapid increase in the severity of pain (on average up to 10 min) and short duration (up to about 50 min).

Pain assessment

An inseparable element of effective analgesia is clinical pain assessment, including the location, migration, nature (quality), intensity, and mitigating factors, pain intensity, efficacy and tolerance of previous treatment, and the occurrence of breakthrough pain. These factors allow us to determine the pathomechanism (type) of pain. An important element of pain assessment is also the evaluation of the mental component [9].

The use of appropriate analgesia should be preceded by an accurate interview and assessment of pain, using formal, validated assessment tools. Due to the complexity of the nature of cancer pain and attempts to classify it, no uniform, universally binding classification of cancer pain has been determined [2].

The most popular and useful tool recommended for the assessment of pain intensity is the NRS (Numerical Rating Scale). It is a 10-point numerical scale in which 0 means no pain, 1–3 (up to 4) means mild pain, 4–6 (up to 7) moderate pain, 7–8 strong pain, and 9–10 very strong pain. The patient evaluates the pain intensity by indicating the number characterising his/her pain sensation. This scale is a standardised tool and is used not only to assess the intensity of pain, but also the effectiveness of treatment. Effective analgesic treatment is when the severity of pain measured by the NRS scale is ≤ 3 [2, 9].

Another method enabling descriptive assessment of pain intensity is the Verbal Rating Scale (VRS), available in two versions, i.e. either four-stage: no pain, weak, moderate, and severe pain, or five-stage Likert version: no pain, weak, moderate, strong, and unbearable pain [2].

The NRS (numerical) scale is more sensitive in comparison to the VRS (verbal) scale; hence, its use in clinical practice and scientific analyses is recommended [9, 14].

Among the available pain assessment tools, there are also image scales (e.g. with facial expressions defining the current state and dedicated mainly to children and people with impaired contact). The next scale is the PHHPS (Prince Henry Hospital Pain Score) used to assess the severity of pain at rest and during movement. It is used in people with postoperative pain [14].

The exact assessment of pain should not be based solely on the evaluation of its intensity but should also include a qualitative assessment of pain and its impact on the patient's functioning. For this purpose, the Brief Pain Inventory (Short Form), the Pain Assessment Sheet, the McGill Pain Questionnaire, and the Doloplus scale are used. In some patients, the test should include an additional assessment of touch, pricking, pressure, temperature difference, vibration, and time summation. This mainly applies to patients with a neuropathic component of pain. Throughout the treatment period, it is necessary to constantly monitor analgesia and vital signs. In recent years, different new forms of screening tools have been developed to facilitate the diagnosis of neuropathic pain, clarify its character, and implement appropriate treatment. It is emphasised that a reliable measurement of pain intensity should be based on more than one method [16]. An example of additional methods may be the DN4 questionnaire (Douleur Neuropathique 4 Questions), PainDETECT Questionnaire, LANSS (Leeds Assessment of Neuropathic Symptoms and Sings), or NPQ (Neuropathic Pain Questionnaire). On the basis of the Delphi analysis, the use of the DN4 scale is particularly recommended for the assessment of neuropathic pain [9, 15].

To assess the severity of pain and its control, it may be useful to propose to the patient that they keep a so-called diary of pain. The patient can use different forms of expressing his/her feelings written in the table or in another way (e.g. by using a verbal description or marking on a scale from 1 to 10 an appropriate number defining his/her pain sensation or drawing a face symbolising the appropriate level of pain sensations). The table can also have an extended version, in which the patient records all information about taken medicines (date, time, medicine, its effectiveness, and others). The mentioned form may additionally support the diagnostic and therapeutic process [17].

Psychological reactions to pain

It is well recognised that pain is perceived in the physical (somatic) mental, social, and spiritual dimensions. The pain caused by cancer, regardless of its stage, has a negative impact on the patient's quality of life, and a low quality of life contributes to an increase of sensitivity to pain and reduces tolerance to pain. Chronic pain, due to its long duration, contributes to the reduction of physical, professional, and social activity [4].

The deterioration of the quality of life of people with chronic pain is also affected by physiological, psychological, and social disorders. This is not directly related to the aetiology of pain, but closely correlates with the duration and intensity of pain. Chronic pain consequently prevents people from carrying out professional tasks, contributes to the limitation and weakening of social contacts, and even worsening of functioning in life roles. Patients develop a sense of hopelessness and negative emotional states, which may result in depression and anxiety [4]. It was found that in the course of cancer the risk of mood and anxiety disorders increases, affecting 47% of cancer patients. The most frequently diagnosed include the following: adaptive (32%), depressive (6%), and isolated anxiety disorders (2%) [2].

Treatment of pain

Pharmacotherapy

Pharmacological treatment of cancer pain is based on WHO recommendations according to the so-called three-stage analgesic ladder.

The first stage of the analgesic ladder

Stage I drugs include non-opioid analgesics for low-intensity pain (1–4 on the NRS scale according to PTBB) and bone pain [9, 10]. This group includes NSAIDs, paracetamol, and metamizole. Paracetamol is safer than NSAIDs and it is recommended by PTBB

as the first choice analgesic in low-intensity pain [9]. In cancer pain with an inflammatory component (including bone pain), NSAIDs are recommended [9, 10]. In addition, non-opioid analgesics may also be used in breakthrough pain in some situations [9]. If the cause of neuropathic pain is nerve compression without permanent damage to the nervous tissue, anti-inflammatory drugs can be beneficial. In the case of permanent nerve damage, NSAIDs are ineffective [18].

As a result of intensive treatment, side effects characteristic for individual groups can occur. Each side effect increases the suffering of cancer patients and worsens the quality of life. Side effects of NSAIDs include the following: gastric mucosa damage, gastrointestinal bleeding, as well as liver and kidney damage. Special care should be taken in elderly people due to the severity of heart and kidney failure. In addition, NSAIDs increase the risk of myocardial infarction and ischaemic stroke, even if used within a short period of time [17]. Metamizole used in colic and breakthrough pain can cause bone marrow damage. An overdose of paracetamol may result in liver damage [13].

The second stage of the analgesic ladder

Drugs of the second stage of the analgesic ladder are so-called weak opioids, used for moderate pain (4–6 on the NRS scale according to PTBB). This group includes tramadol, codeine, and dihydrocodeine [9, 10]. They are used in the case of ineffectiveness of drugs of the first level of the WHO analgesic ladder. Weak opioids are characterised by a ceiling effect — exceeding the maximum dose does not increase analgesia, but only increases the risk of side effects [18]. Tramadol is the recommended first-choice drug of the second stage of the analgesic ladder [9]. It should be remembered, however, that the analgesic activity of tramadol is dependent on the CYP2D6 enzyme; therefore, in people not metabolising the substrates of this enzyme, the analgesic effect is weaker. In addition, care should be taken in the elderly and in patients with epileptic seizures, because tramadol decreases the seizure threshold. It should not be used concomitantly with antidepressants due to the risk of serotonergic syndrome [9, 10].

Opioids have an additional antitussive and antidiarrhoeal effect, reducing the severity of additional symptoms of cancer [13]. Codeine and dihydrocodeine can be used in patients with pain of moderate intensity accompanied by cough. It should be remembered that codeine induces severe side effects (especially in young people) and is not the preferred drug according to PTBB recommendations [9]. In the case of long-term use of opioid drugs, some patients may experience persistent constipation and nausea and vomiting. When starting opioid use, antiemetics should be recommended for the first 5–7 days and laxatives [9].

On the second stage of the analgesic ladder the small doses of the so-called strong opioids (i.e. morphine 30 mg orally daily, oxycodone 20 mg orally daily, hydromorphone 4 mg orally daily) can be also used [9]. There is no evidence of increased side effects of this treatment regimen compared to the use of so-called weak opioids [10].

According to PTBB and ESMO recommendations, weak and strong opioids should not be combined [9, 10].

The third stage of the analgesic ladder

Drugs of the third stage (so-called strong opioids — e.g. fentanyl, morphine, tapentadol, oxycodone, hydromorphone, buprenorphine, methadone) are used in the case of ineffectiveness of drugs from previous groups. Morphine, oxycodone, hydromorphone should be the first-line drugs for the treatment of moderate to severe pain (6–10 on the NRS scale) [9, 10].

In addition to the analgetic effect morphine also reduces the feeling of dyspnea. The advantages of morphine in the treatment of patients with cancer pain are: no ceiling effect and the possibility of application in any form (oral, subcutaneous, intravenous, rectal, transmucosal, epidural, subarachnoid, and locally on skin and mucous membranes affected by disease). In cancer patients receiving morphine in analgesic doses in symptomatic treatment, respiratory depression is rare because pain is a strong agonist to the respiratory centre. In general, morphine is recommended in the oral form, and in patients with swallowing problems, the subcutaneous form should be used [9, 11, 13]. Morphine in intravenous form should be administered to people with massive peripheral oedema, coagulation disorders, and poor peripheral circulation. Morphine and oxycodone should not be used in patients with renal insufficiency due to the reduced elimination of metabolites [9, 10].

According to the recommendations of PTBB, oxycodone or oxycodone with naloxone should be the first choice in the treatment of cancer pain with a visceral component. In addition, oxycodone is an appropriate medicine for neuropathic pain [9, 10].

Fentanyl is used as a transdermal system, and in breakthrough pain it also works in sublingual, nasal, and buccal form. The biggest threat with its use is associated with drug accumulation and strong physical and mental addiction. Percutaneous forms are not suitable for the treatment of patients with unstable pain and fever [9, 18]. However, it should be remembered that in patients with breakthrough pain a first-choice analgetic should be an oral drug in an immediate release formulation, while the use of transmucosal fentanyl should be secondary. The dose of the drug in breakthrough pain should be 15–20% of the daily dose of the parent drug or another opioid after dose conversion [9, 10].

Buprenorphine is 75 times more potent than morphine; it is characterised by significant lipophilicity and is used primarily in the transdermal form. Buprenorphine as well as fentanyl and methadone can be safely used in chronic renal disease with GFR < 30 mL/min [9, 10]. Buprenorphine is the first-choice drug in the elderly and in patients with liver failure [9]. It can be used in a sublingual form in breakthrough pain.

Methadone is applicable when other strong opioids are ineffective or when their side effects occur [9, 10, 18].

Hyperalgesia is a usual side effects of all opioids. This is a paradoxical reaction with pain intensification when using opioid drugs. The mechanism is not well understood, it is thought that it may be a genetic basis for opioid receptors. In the case of hyperalgesia to a specific opioid, switching to another drug also from the opioid group is recommended. A dose reduction of opioid causing hyperalgesia and adding of coanalgesics is a scheme less recommended by PTBB [9].

Coanalgesic adjuvants

The typical analgetic drugs, which can be added on each stage of the analgesic ladder, include coanalgesics or coanalgesic adjuvants. Supportive therapy usually refers to neuropathic or bone pain. This group includes — among others — corticosteroids, anticonvulsants (carbamazepine, gabapentin), local anaesthetics, calcitonin, cannabinoids and antidepressants (e.g. tricyclic antidepressants — amitriptyline, doxepin, nortriptyline, desipramine and tetracycline antidepressants — mirtazapine, serotonin reuptake inhibitors — escitalopram, citalopram, fluoxetine, fluvoxamine, paroxetine, sertraline, serotonin and epinephrine reuptake inhibitors — venlafaxine, duloxetine, milnacipran). The mechanism of action of antidepressants consists of inhibition of NMDA receptors or inhibition of noradrenaline/serotonin reuptake from the synaptic cleft, contributing to the intensification of nociception inhibition. The use of coanalgesics is helpful in treating the accompanying symptoms in oncological disease and chronic pain: insomnia, anxiety, and depression [9, 11].

Psychotherapy and other non-pharmacological methods

Psychotherapy is used in various dysfunctions and diseases, including as a complementary treatment method to pharmacotherapy in cancer patients with chronic pain. Over the last three decades Cognitive Behavioural Therapy (CBT) has been mainstreamed and has become a recommended psychotherapy method. Evidence of its effectiveness in pain problems and comprehensive pain syndromes is confirmed by numerous randomised studies. CBT is the main method dedicated to patients with pain and can be used alone or in combination with medical methods in an interdisciplinary aspect. Importantly, it is used in the treatment of all types of chronic pain, not only cancerous [19, 20].

Numerous studies show that strong pain fosters a growing sense of threat and ruminating and induces the conviction of an inability to cope with it, which is associated with the occurrence of physical and psychosocial disorders (even after controlling pain and reducing the level of depression). There are a lot of questions in the analyses regarding the occurrence of mood, anxiety, and sleep disorders in many people struggling with chronic pain, in which CBT could be applicable [19, 20].

The main goal of psychotherapy is to reduce the feeling of pain and mental suffering and to improve the physical and role functions. This is achieved by working on the change of "maladaptive" behaviours, increasing adaptive behaviour, identifying and correcting "maladaptive" thoughts and beliefs, as well as increasing self-effectiveness in coping with pain [19, 20].

There is no standard algorithm or procedure for analgesic treatment using psychotherapy in the CBT paradigm. The time devoted to the clinical diagnosis, evaluation, and number of sessions and therapeutic techniques used is individual and diverse. The most commonly used techniques include relaxation training, setting and working towards behavioural goals (usually involving systematic increase in physical activity and other activities), behavioural activation, activity stimulation tips, problem-solving education, and cognitive restructuring. Typically, in cognitive-behavioural therapy, there are exercises between therapeutic sessions to train and apply new skills (e.g. thought recording, relaxation practice, work on behavioural goals) [17, 19, 20].

The effectiveness of CBT in the treatment of chronic pain has been confirmed by meta-analyses and numerous opinions, which, however, emphasise the role of CBT as part of the therapeutic program alongside pharmacotherapy and the patient's own work [19, 20].

Among other methods supporting the process of pain treatment, one should mention hypnosis, which acts by lowering distress (demotivating — harmful stress), and relaxation and meditation methods. An important method is psychoeducation, which is designed to educate patients of understanding and ways of communicating the problems related to pain, anxiety, and depressed mood. The effect of psychoeducation is to increase the sense of self-efficacy and certainty as to the ability to deal with it. Research results indicate that education, hypnosis, relaxation, and visualisation support the acquisition of stress management skills and, independently of analgesics, may reduce the intensity of pain. These effects are so significant that they should be considered

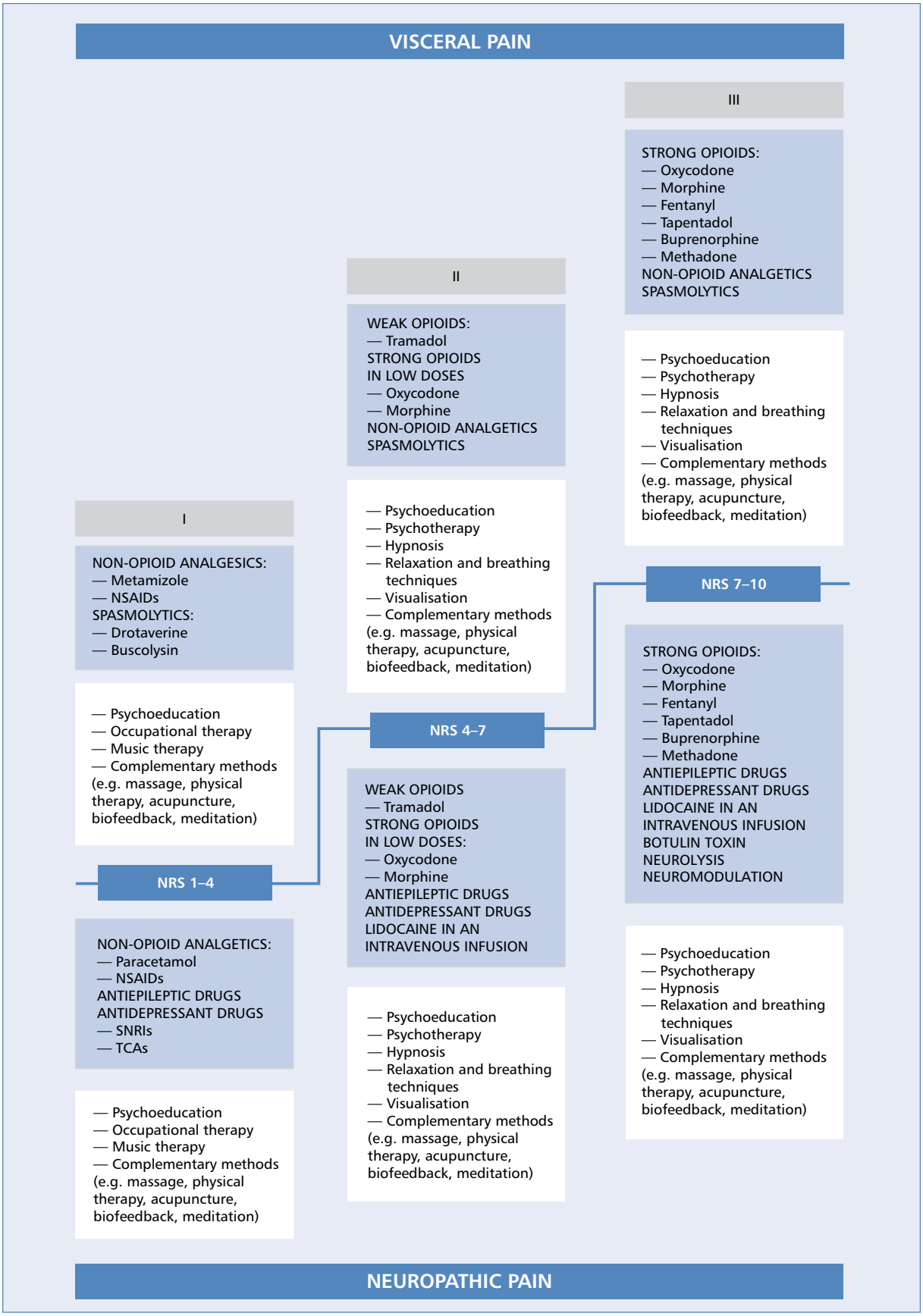

Figure 1. Interdisciplinary treatment of chronic pain. Own elaboration based on literature included in the bibliography

as the standard elements of care for patients treated for cancer pain [17, 20, 21].

It is undeniable that psychological factors contribute to an increase in the pain and suffering experienced by the patient. However, knowledge about the aetiology of pain and methods of optimal coping with it are insufficient, and questions about which strategies are the most effective for which pain syndromes remain unanswered. There is a need for professional integration of people with specialist knowledge in the field of pain treatment, at both the medical and psychological levels [19–21].

Issues regarding the treatment of pain and care of patients at the request of the Polish Society for the Study of Pain were legally enshrined in the amendment to the Law on Patients' Rights and the Patient's Rights Ombudsman of May 11, 2017. In Chapter 6, art. 20, p. 13 we can read:

"1. *The patient has the right to pain treatment.*
2. *The entity providing health services is obliged to take actions to determine the degree of pain intensity, treat pain, and monitor the effectiveness of this treatment*".

According to the aforementioned, it is the duty of the medical personnel not only to apply the treatment in connection with the underlying disease, but also to conduct the treatment in connection with the accompanying painful ailments. Therefore, the patient has the right to require appropriate analgesics from every doctor and health care facility [22].

Summary

Pain is a phenomenon and experience not only physical but also emotional, psychosocial, and spiritual. In connection with the perception of psychological and existential needs related to pain, the necessity to supplement therapeutic procedures has arisen. According to this idea, the treatment of chronic pain in the course of cancer cannot be limited to pharmacological treatment alone, and psychotherapeutic methods should not be treated as an addition or as an alternative to pharmacological treatment of pain. Figure 1 presents a proposal for the treatment of chronic pain, in which, on the basis of the analgetic ladder, pharmacological and non-pharmacological methods of pain therapy according to its intensity and aetiology are presented (divided into visceral and neuropathic pains). Supportive methods were considered such as physiotherapy, visualisation techniques, relaxation techniques, crisis interventions, methods using art and music, desensitisation, and others. Coanalgesics or additional agents (e.g. bisphosphonates, denosumab, or glucocorticosteroids and non-pharmacological treatment techniques — localised radiotherapy, radioisotopes in multifocal pain, percutaneous TENS nerve electrical stimulation, epidural or spinal analgesia, and others) should be a complement.

One should always take an individual approach to therapeutic interactions based on the patient's needs and personal features. It is necessary to take into account the purpose of such therapy, consisting of increasing the sense of pain control and significantly improving patients' quality of life. These procedures should also focus on psychosocial support and provide appropriate education for the families and relatives of the patient. The above activities increase the patient's sense of control and reduce the level of helplessness of caregivers and family. Pharmacological treatment is commonly insufficient and can be associated with a multitude of side effects or a lack of therapeutic effects. Integrated treatment of people with chronic pain will significantly reduce its level or completely eliminate it, which in turn will translate into restoring the patient's will to continue their lives and give them strength to deal with the disease. Achieving success on this basis is associated with the necessity of close cooperation between oncologist and a psychooncologist or psychologist, preferably at the level of a multidisciplinary team (MDT).

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