

54 - PHARMACOLOGICAL THERAPY FOR CONTROL OF CANCER PAIN

WERUSKA ALCOFORADO COSTA
 GLAUCEA MACIEL DE FARIAS
 LUIZ ALVES MORAIS FILHO
 KAROLINA DE MOURA MANSO DA ROCHA
 FÁTIMA HARYANNY GOMES RUFINO MINEIRO
 Universidade Federal do Rio Grande do Norte, Natal/RN, Brasil
 wealcoforado@terra.com.br

INTRODUCTION

According to the World Health Organization (WHO) (2007), are estimated 15 million new cancer cases for the year 2020. This statistic suggests that the pain from the cancer is a major cause for seeking health care for patients suffering from this disease (RIPAMONTI; BANDIERI, 2009).

So when it comes to cancer patients, pain is estimated at around 50% of people in the early stages of the disease, occurring in 70% to 90% in those with advanced disease, which is defined as presenting without metastasis possibility of cure (JUVER; VERÇOSA, 2008; MAIR, 2009).

In this sense, the pathophysiology involving cancer, the subject involved in this disease has a progressive pain, interfering directly in their quality of life by influencing the implementation of their activities of daily living (ADL's), in their interpersonal relationships and their social life as a whole (COSTA, 2009).

Considering the deteriorating health of people, Deandrea et al. (2008) say that pain is one of the main signs reported by cancer patients. It is regarded as the second signal most feared by people who were recently diagnosed, and the fear of death the main sensation faced by these people.

Castro et al. (2006) point out that pain, regardless of pathology, has been a major concern of mankind, which has sought relentlessly for answers comforting to generate explanations of the questions arising from the pain and suffering that hovered over the daily life of being. The need for justification of their origin and the possibility of control, whether under temporary or permanent, have always been prominent position in the course of history by both the public and by researchers and health professionals.

Simultaneously, the pain covers definitions and different meanings depending on the individuality of each social subject. There is therefore a loss of the concept of the sign and suffering as a mystical sense, being replaced by assumptions of changes in neurophysiological mechanisms as changes in perception, covering both cognitive activity on the behavioral (PESSINI, 2004).

Therefore, it is considered as a major concern for humanity to understand the painful phenomenon, as this continues throughout the evolutionary path of human existence (CASTRO et al., 2006).

Thus, the WHO recommended as a top priority in public health system the effective control of pain, for its an emergency, through the "analgesic ladder". The pain control should be considered as a reference in evaluating the quality of life of these patients. It should emphasize the importance of humane assistance in order to listen to what the patient reports, because the fact of pain is subjective, is only understood, indeed, its meaning when we put ourselves available for patient care (RIPAMONTI; BANDIERI, 2009).

Thus, realizing the difficulty in controlling cancer pain, we question how the pharmacotherapy pain threshold for the control of cancer pain is discussed in the literature. Therefore, this study aimed to achieve an approach to drug therapy to control cancer pain.

METHODOLOGY

This is a narrative review conducted in virtual databases, using scientific articles available on the website of the Virtual Health Library (BIREME), specifically in the databases of Latin American Literature (LILACS), International Literature in Health Sciences (MEDLINE) and within the Capes, the databases and Web CINAHALL the Science. We used the descriptors "pain", "drug therapy" and "cancer" (pain / cancer / pharmacotherapy, pain / cancer / drug therapy), according to the classification of the descriptors in the Health Sciences (DECS).

Inclusion criteria: studies addressing the issue of drug therapy cancer pain, full text published and time limits from 2000 to 2008, in Portuguese, English or Spanish.

PHARMACOLOGICAL THERAPY

Due to the complexity involved in cancer pain and the multiple factors that influence it, we will focus on the therapeutic modalities divided into pharmacological and invasive therapy.

The control of cancer pain arises from certain principles, according to Lauretti, Ferreira (2007): The choice of appropriate analgesic based on pain intensity, strict adherence to the schedule of medications and careful adjustment of doses of medicines, which may suffer change as the needs of each patient.

It is worth noting that health professionals, especially doctors because of their professional competence, have the responsibility to initiate drug therapy pain threshold, so that it recognizes the complaint of pain in one patient were reported this or not (SIGN, 2008).

Thus, it is necessary for the construction of the treatment plan the patient, according to their ability, be involved in this care, because as Pepper, Teixeira (1996), we can not forget that this is the "authority" in the search for the main control pain.

WHO, noting the increase in the incidence of new cases of cancer worldwide, has prioritized four important points to be made in combating this disease as prophylaxis and prevention, the search for early diagnosis and treatment of cancers of proper diagnosis and treatment of pain (WHO, 1986). Thus, in 1986, the WHO has suggested the establishment of an "analgesic ladder" consisting of three steps, guiding the drug therapy recommended based on the intensity of pain.

It was then that the protocol established by the WHO guideline on relief of pain in cancer (1986), which today continues to be used in the management of cancer pain, has an efficiency of 80% to 90% of patients (OLIVEIRA, TORRES, 2003; REEVES, 2008; MAIR, 2009). As Gill (2002) only 10% to 20% did not respond significantly to conventional analgesic treatment.

However, for this treatment has a real efficacy, the WHO (2002) called for five steps, taken as steps to be followed. The first is "the mouth", ie the priority of the administration of medications proposed to be taken orally and when not possible,

alternatives should be considered as intramuscular and subcutaneous (HUTTON, MCGEE, DUMBAR, 2008).

The second involves "the clock" administration of analgesics should be done at regular intervals, with the next dose before the end of the previous effect. Therefore, it is necessary that the trader has knowledge of the pharmacology of drugs which are being prescribed and / or administered (WHO, 2002; GONÇALVES, 2002; MAIR, 2009).

The third step is "the ladder" according to the intensity of pain if the patient report their pain complaints as mild, your drug plan is established at the first step by making use of non-opioid medication such as paracetamol and aspirin. When the pain is described as moderate, therapy is indicated to the second step with weak opioids such as codeine with a non-opioid if necessary. In turn, the pain being reported as strong or severe guided therapy third step with strong opioid such as morphine with or without opioid if necessary. Emphasized the use of adjuvants for each step, are to contribute in reducing the painful process or to prevent or stop the side effects of analgesics (WHO, 2002; GONÇALVES, 2002; MAIR, 2009).

The fourth step is "to the individual" and there is no exact time to start opioid administration or what the correct dose that relieves pain, and everything is based on the subjectivity of pain portrayed by the subject. The fifth step is "attention to detail," emphasizing the importance of recording the administration of drugs, taking care in clinical practice not to disturb the sleep of these patients (WHO, 2002; GONÇALVES, 2002; MAIR, 2009).

That said, we will discuss a little about the drugs that make up each rung of the "analgesic ladder" (WHO, 1986, WHO 1996, WHO, 2002):

The first step is indicated for pain as mild, classified as <3 on a numeric scale from 0 to 10, composed of non-opiate drugs such as aspirin and paracetamol, or any other anti-inflammatory drug (NSAID) appropriate (SIGN, 2008).

NSAIDs are drugs that have anesthetic activity both as antipyretic and anti-inflammatory, differ in the pharmacokinetics, potency and efficacy of anti-inflammatory analgesic, is also differentiated by the inhibitory mechanism of COX-1 and COX-2. The enzyme cyclooxygenase function is to catalyze the conversion of the acid araquidônio prostaglandin G2 (GONÇALVES, 2002, OLIVEIRA, TORRES, 2003).

Side effects derived from these non-opioid medications include stomach irritation, fluid retention and possible gastrointestinal bleeding by altering platelet aggregation by inhibiting thromboxane A2 (GONÇALVES, 2002; REEVES, 2008).

The second step is indicated for pain considered average or moderate, falling with the score 3 to 6 as a numerical scale from 0 to 10 (SIGN, 2008), is the use of weak opioids such as codeine, propoxyphene, tramadol, and may be added the use of non-opioid (LEON-CASASOLA, 2008).

Codeine is taken as the opioid of choice for mild pain, have an analgesic action, despite being less than 1 / 12 the action of morphine, has also antitussive and antidiarrheal properties. Presents a peak concentration around an hour, with its half-life of 4 to 6 hours. Tramadol is other opioids used and is considered a weak inhibitor of norepinephrine and serotonin recapitação and peak activity occurs around 2 hours taking your life in about six hours (OLIVEIRA, TORRES, 2003).

The third step is indicated for pain considered severe and palliative care to patients without therapeutic possibility. According to a numerical scale from 0 to 10, presents a value greater than or equal to seven, is composed of strong opioids such as morphine, oxycodone, methadone and fentanyl patch (LEON-CASASOLA, 2008; SIGN, 2008).

Morphine is the drug of choice to treat severe pain according to the protocol of the WHO cancer pain due to the low value and anesthetic potency (LAURETTI, FERREIRA, 2007; HUTTON; MCGEE, DUMB, 2008). This product does not present dose limit, which is calculated in sufficient quantity to relieve pain. However, studies have shown that the maximum doses used most are around 200 mg a day to avoid respiratory depression and severe constipation (WHO, 1986; GONÇALVES, 2002; SIGN, 2008). Importantly, the use of morphine is based on the intensity of pain rather than the issue of life expectancy (LAURETTI, FERREIRA, 2007).

The major side effects related to the use of strong opioids are nausea, vomiting, lethargy, transient sedation, cognitive failure, constipation, urinary retention, respiratory depression, tolerance, dependence (OLIVEIRA, TORRES, 2003; LAURETTI, FERREIRA, 2007; REEVES, 2008; KURITA et al., 2008).

Knowing the importance of the association of drugs described with adjuvants, if necessary a small approach to these medications. Thus, it is considered an adjuvant drug that commonly are not classified as analgesics, but relieve pain in certain situations. The main drugs that constitute this classification are antidepressants, anticonvulsants and corticosteroids (GONÇALVES, 2002; SIGN, 2008; REEVES, 2008).

When the pain comes from a compression of a nerve or inflammation, the adjuvant of choice is corticosteroids, but when the pain is neuropathic etiology of the main drugs of relief that responds to that event type are antidepressants and anticonvulsants. Thus, the drug used first line in the fight against neuropathic pain include tricyclic antidepressants, the selective serotonin-reuptake inhibitors of norepinephrine (REEVES, 2008).

It should be noted, though, the use of other drugs in combating algia bone metastases originating from as bisphosphonates (pamidronate), calcitonin, the radiotherapy (strontium-89 and samarium-153). The so called bisphosphonates are designed to inhibit the function of osteoclasts and consequently decreases bone resorption. In turn, the use of radiotherapy is being a technical aid in the fight against localized bone pain, and responds poorly to opioids, when such pain is generally the same answer more efficiently to NSAIDs (LAURETTI, FERREIRA, 2007). Importantly, both radiotherapy and chemotherapy are commonly used to treat the reduction of tumor masses, also play a significant role in the fight against bone pain (FONOFF et al., 2008).

Another method of pain relief to cancer is through invasive techniques, which are used as complementary treatment, its use may be deployed even at the beginning of treatment. Among them include: anterolateral cordotomy, celiac neurolysis procedures, stroke, pithing extraleminiscal, adenólise pituitary and infusion of drugs in the cerebrospinal fluid space (intrathecal) (OLIVEIRA, TORRES, 2003; FONOFF et al., 2008).

In the procedure of anterolateral cordotomy, the subjects experience pain in the inferolateral quadrant of the body like the chest, abdominal wall, flank, lower back and lower limb unilateral. This method provides a complete analgesia, because the patient no longer feel pain in that region, being used in patients without therapeutic possibilities. The celiac neurolysis is the destruction of sympathetic plexus when there is involvement of abdominal viscera or retroperitoneal. It is emphasized blockade of peripheral nerves where the pain is localized to the brachial plexus block continuous (OLIVEIRA, TORRES, 2003; FONOFF et al., 2008).

The procedures are chosen brain when pain is restricted to the upper limbs, neck and face, the choice of pithing extraleminiscal is due to pelvic pain and visceral, which show good response to this procedure. Regarding the method, adenólise pituitary is used to treat pain by bone metastases (FONOFF et al., 2008). Another option is intrathecal analgesia used when the pain is multiple, distributed and when there is no effective systemic medication (OLIVEIRA, TORRES, 2003; FONOFF et al., 2008).

Despite this range of availability for the minimization and / or cessation of pain conditions for cancer patients, effective

control of symptoms that compromise is not always performed in clinical routine. Unfortunately, this difficulty is triggered due to lack of staff training in assessing patients' pain, from the educational gaps in university curricula by the fear of painkiller addiction stemming both from the patient or family members and professionals, the patients' difficulty in report and to characterize their pain, and the challenge of controlling the adverse effects of medications. Thus, the pain remains undertreated and subidentificada (REEVES, 2008).

FINAL CONSIDERATIONS

Pain is a subjective clinical phenomenon, which requires a pharmacological treatment consistent with their intensity and that complies with the analgesic ladder as proposed by the WHO. It is emphasized also the need for a multidisciplinary approach to treatment, because in this way, the pain would be under-identified and undertreated by health professionals.

Thus, the entry of these professionals to real pharmacological treatment that cancer patients need is essential for a favorable resolution of pain control, since this enables the beginning of a renewal in the academic education reflecting, in their professional conduct.

KEY WORDS: CANCER, PAIN, PHARMACOLOGIC THERAPY

REFERENCES

- CASTRO, M. et al. Prevalência de ansiedade, depressão e características clínicas-epidemiológicas em paciente com dor crônica. **Rev. Baiana de Saúde Pública**, v. 30, n. 2, p. 211-223, 2006.
- COSTA, C.M.C [tradutor] **Global Year Against Cancer Pain**. 2009. Disponível em: <http://www.dor.org.br>. Acesso em: 10 de jun de 2009.
- DEANDREA, S. et al. Prevalence of undertreatment in cancer pain. A review of published literature. **Annals of Oncology**, v. 19, n. 12, p. 1985-1991, 2008.
- FONOFF, E. T. et al. Dicas para o tratamento da dor oncológica. In: BUZAID, A. C.; HOFF, P. M. **Mini-MOC – Pocket Book do Manual prático de oncologia clínica do Hospital Sírio Libanês**. 1ª ed. São Paulo: Dendrix Edição e Design Ltda, cap. 17. p. 204-209, 2008.
- HUTTON, N.; MCGEE, A.; DUMBAR, C. A guide to cancer pain management. **British journal of community nursing**, v. 13, n. 10, p. 464-470, 2008.
- JUVER, J. P. S.; VERÇOSA, N. Depressão em pacientes com dor no câncer avançado. **Rev. bras. de Anestesiologia**, v. 58, n. 3, p. 287-298, 2008.
- KURITA, G. P. et al. Alteração na atenção e o tratamento da dor do câncer. **Rev. Esc. Enferm. USP**, v. 42, n. 1, p. 143-151, 2008.
- LAURETTI, G. R.; FERREIRA, A. S. M. Tratamento da dor crônica neoplásica. **Dor é coisa séria**, v. 3, n. 3, p. 2-7, 2007.
- LEON-CASSOLA, O. Implementing therapy with opioids in patients with câncer. **Oncology nursing forum**, v. 35, n. 6, p. 7-12, 2008.
- MAIR, J. Caring for people with chronic câncer pain. **Journal of Community Nursing**, v. 23, n. 5, p. 10-16, 2009.
- OLIVEIRA, A. S.; TORRES, H. P. O papel dos bloqueios anestésicos no tratamento da dor de origem cancerosa. **Rev. Bras, de Anestesiologia**, v. 53, n. 5, p. 654-662, 2003.
- OMS. Organização Mundial de Saúde. Mirlian Marlete (trad^a). **Alívio da dor do câncer**. São Paulo: Atheneu, 1986.
- PESSINI, L. Humanização da dor e do sofrimento humano na área da saúde. IN: PESSINI, L.; BERTACHINI, L. [orgs]. **Humanização e cuidados paliativos**. 3. ed. São Paulo: Loyola, 2004.
- PIMENTA, C. A. M.; TEIXEIRA, M. J. Questionário de dor McGill: proposta de adaptação para a língua portuguesa. **Rev. Esc. Enferm. USP**, v. 30, n. 3, p. 473-483, 1996.
- REEVES, K. A cancer pain primer. **MEDSURG Nursing**, v. 18, n. 6, p. 413-419, 2008.
- RIPAMONTI, C.; BANDIERI, E. Pain therapy. **Critical reviews in oncology/hematology**, v. 70, p. 145-159, 2009.
- SIGN. **Controle f pain in adults with câncer**: a national clinical guideline, 2008.
- WHO, World Health Organization. **Cancer pain relief**: with a guide to opioid availability, 2ª ed., 1996.
- WHO, World Health Organization. **National Cancer control Programmes – Policies and managerial guidelines**. 2ª ed., 2002.
- WHO, World Health Organization. **The World Health Organization's fight against cancer**: strategies that prevent, cure and care. 2007.

Main Author:: WERUSKA ALCOFORADO COSTA. Endereço: Av. Afonso Pena, nº 1199, Bairro: Tirol, Edifício Esmeralda, Apto 105, Natal/RN, Brasil. Phone: (084) 32224261/ (084) 88742306. E-mail: wealcoforado@terra.com.br

PHARMACOLOGICAL THERAPY FOR CONTROL OF CANCER PAIN

ABSTRACT

Introduction: one of the main complaints of cancer patients is pain. The World Health Organization (WHO) recommended as a priority in the health system the world pain control through the "analgesic ladder" that guides health professionals in the clinical management of this patient. Objective: To make an approach to drug therapy to control cancer pain. Methodology: It is a narrative review held in databases in the Virtual Health Library (BIREME), the foundations of Latin American Literature (LILACS) and International Literature in Health Sciences (MEDLINE) and within the Capes bases CINAHAL and the WEB SCIENCE. Discussion: the control of cancer pain arises from principles such as choice of appropriate analgesic as pain intensity, strictly following the schedule of medication and careful adjustment of doses of medicines, which may change as the patient's need. It is necessary for the construction of the treatment plan is based on the patient, it is the "authority" in the search for pain control. Conclusion: pharmacological treatment should be consistent with the intensity of the patient's pain and that is according to the analgesic ladder as proposed by the WHO, therefore minimize the under-identification and under-treatment of pain.

KEY WORDS: Cancer, Pain, Pharmacologic Therapy

THÉRAPIE PHARMACOLOGIQUE POUR LE CONTRÔLE DE LA DOULEUR DU CANCER

Introduction: la douleur est l'une des principales plaintes du patient portant un cancer. L'Organisation mondiale de la santé (O.M.S.) préconise le contrôle algique comme l'une des priorités du système de santé mondial par l'intermédiaire de l'« échelle analgésique » qui oriente les professionnels de la santé dans les procédures cliniques. Objectif: réaliser une approche de

thérapie pharmacologique pour le contrôle de la douleur oncologique. Méthodologie: il s'agit d'une révision narrative réalisée dans les bases de données dans la Biblioteca Virtual em Saúde (Bibliothèque Virtuelle en Santé) – BIREME -, dans les bases de la Littérature Latino-américaine - LILACS - et Littérature Internationale en Sciences de la Santé - MEDLINE - et sur le Portail Capes dans les bases CINAHAL et WEB os Science. Discussion: le contrôle de la douleur du cancer advient de principes comme le choix de l'analgésique adéquat selon l'intensité de la douleur, observation rigoureuse de l'horaire des médicaments et attention à l'ajustement des doses des médicaments, qui peuvent subir une modification conformément au besoin du patient. Il est nécessaire que la construction du plan thérapeutique se base sur le patient, car c'est lui l' « autorité » à la recherche du contrôle de la douleur. Considérations Finales: le traitement pharmacologique doit être cohérent avec l'intensité de la douleur du patient et se réaliser selon l'échelle analgésique que proposa l'O.M.S., car il diminuerait la sous-identification et le sous-traitement de la douleur.

MOTS CLES: Cancer; Douleur; Thérapie pharmacologique.

TERAPIA FARMACOLÓGICA PARA EL CONTROL DEL DOLOR DEL CANCER

RESUMEN

Introducción: una de las principales quejas del paciente oncológico es el dolor. La Organización Mundial de la Salud (OMS) lo definió como una de las prioridades del sistema de salud mundial el control álgido por medio de la "escala de analgesia" orienta a los profesionales de salud para las conductas clínicas en el paciente. Objetivo: realizar un enfoque sobre terapia farmacológica para el control del dolor oncológico. Metodología: revisión narrativa realizada en las bases de datos: Biblioteca Virtual de Salud (BIREME), en las Bases de Literatura Latinoamericana (LILACS), y Literatura Internacional en Ciencias de la Salud (MEDLINE) En el Portal Capes en las bases de datos CINAHAL e Web os Science. Discusión: el control del dolor del cáncer viene de principios como la elección del analgésico adecuado, de acuerdo a la intensidad del dolor, cumplimiento riguroso del horario de las medicaciones y cuidado con el ajuste de las dosis de los medicamentos, los que pueden sufrir alteraciones conforme las necesidades de los pacientes. Es necesario que la construcción del plano terapéutico se base en el paciente, pues es considerado la "autoridad" en la búsqueda por el control del dolor. Consideraciones Finales: el tratamiento farmacológico debe ser coherente con la intensidad del dolor del paciente, según la escala analgésica propuesta por la OMS, pues esta minimiza la sub-identificación impidiendo el sub-tratamiento del dolor.

PALABRAS CLAVES: Cáncer, Dolor, Terapia Farmacológica.

TERAPIA FARMACOLÓGICA PARA O CONTROLE DA DOR DO CÂNCER

RESUMO

Introdução: uma das principais queixas do paciente oncológico é a dor. A Organização Mundial de Saúde (OMS) preconizou como uma das prioridades do sistema de saúde mundial o controle álgico por meio da "escada analgésica" que orienta os profissionais de saúde nas condutas clínicas a esse paciente. Objetivo: realizar uma abordagem sobre terapia farmacológica para o controle da dor oncológica. Metodologia: trata-se de uma revisão narrativa realizada em bases de dados na Biblioteca Virtual em Saúde (BIREME), nas bases da literatura Latino-Americana (LILACS) e Literatura Internacional em Ciências da Saúde (MEDLINE) e no Portal Capes nas bases CINAHAL e WEB os Science. Discussão: o controle da dor do câncer advém de princípios como a escolha do analgésico adequado conforme intensidade da dor, cumprimento rigoroso do horário das medicações e cuidado com ajuste das doses dos medicamentos, que podem sofrer alteração conforme necessidade do paciente. É necessário que a construção do plano terapêutico seja baseada no paciente, pois é a "autoridade" na busca pelo controle da dor. Considerações Finais: o tratamento farmacológico deve ser coerente com a intensidade da dor do paciente e que esteja conforme a escada analgésica proposta pela OMS, pois, minimizaria a sub-identificação e sub-tratamento da dor.

PALAVRAS CHAVES: Câncer; Dor; Terapia Farmacológica

PUBLICAÇÃO NO FIEP BULLETIN ON-LINE: <http://www.fiepbulletin.net/80/a2/54>