The role of nursing in pain management in patients with terminal cancer

O papel da enfermagem no manejo da dor em pacientes com câncer terminal

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ARTICLE INFORMATION
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Health Sciences
Main topic: Role of Nursing
Main practical implications: Pain management in terminal cancer patients continues to be an important aspect of the nursing profession, since nurses are often the professionals who spend the most time with patients and their families.
Originality/value: It offers a synthesis of the available literature about the nursing role, evidencing that requires not only clinical but also cultural competence.

ABSTRACT
Introduction: Treatment with chemotherapy is the most widely used in almost all types of neoplasms, however, the side effects that it triggers affect the patient’s style and quality of life, for this reason the nursing staff must know what their intervention should be with these patients. Objective: To analyze the role played by the nursing staff in patients receiving chemotherapy. Methodology: A study was carried out with a qualitative, descriptive approach, non-experimental design, the databases used included search engines such as Scopus, PubMed, eJournals, Google Scholar and Trip Database, Scielo, Ocrnos. A total of 27 articles are included. Results: Nursing care for patients undergoing cytostatic therapy must be comprehensive from a holistic approach. In which it allows to cope with activities that are of the utmost importance for the patient such as reducing the risk of phlebitis and extravasation, controlling nausea and vomiting, informing about side effects. In this way it provides physical, emotional, psychological, and practical support. Conclusion: The nursing role is one of the most essential pillars when providing the care required by cancer patients, allowing maintaining the integrity of the skin, achieving optimal nutritional status, attending to the emotional spheres of the patient, reducing the degree of duration of diarrhea, correct medication administration and effective communication.

Keywords: Nursing staff, terminal cancer, palliative care, pain management.

RESUMEN

Palavras-chave: Equipe de enfermagem, câncer terminal, cuidados paliativos, manejo da dor.
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INTRODUCTION

Over the past decades, nurses have advanced practice, research, and education in the field of cancer pain. In practice, nurses assume primary responsibility for pain assessment, intervene with pharmacological and non-pharmacological treatments, and monitor and evaluate patients’ responses to pain therapies (Reyes-Pacheco, 2019).

In practice, nurses work independently or in collaboration with physicians and also prescribe analgesic regimens for pain and influence the development of evidence-based practices and translate research and guidelines so that clinical care is in line with scientific findings and accepted practices (Díaz-Morales et al., 2019).

Pain management in patients with terminal cancer remains an essential aspect of nursing practice. While important for all clinicians, nurses are often the professionals who spend the most time with patients and their families. The holistic perspectives of nurses support the need for comprehensive assessments of pain and its impact on all aspects of life for patients and their caregivers (Fonseca & Novoa, 2020).

The literature related to assessment demonstrates important benefits in terms of obtaining clinical information to better understand pain and guide care. Pain assessment documentation practices are critical to justify the basis for pain treatments, monitor therapeutic responses to interventions, and ensure safe as well as quality care for each patient. Pain assessments are necessary to evaluate the nature of pain (Vargas & Huancuni, 2019).

Cancer pain can be acute, chronic and very severe. It can be opioid sensitive, partially sensitive or opioid resistant. As the tumour grows, it puts pressure on organs causing ischemic or colicky pain, or on nerves causing neuropathic pain. The pain could be due to treatment, for example, side effects of radiotherapy, stomatitis due to chemotherapy, or constipation due to opioids (Herrero Trujillano et al., 2019; Pineda González et al., 2019; Vilchis-Valentín et al., 2021).

The role of nurses in cancer pain management includes believing the patient, assessing pain, identifying the root cause, planning care, administering medication, assessing efficacy, ensuring good pain control and individualizing treatment. It also includes nursing interventions such as providing sensitive nursing care, preventing pain, educating, advocating, communicating, comforting, supporting and counselling the patient (Carvajal-Valdý et al., 2020; Torcal Baz et al., 2020; Velásquez & Salas, 2020).

Nursing

Nursing encompasses the autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, the prevention of illness and the care of the sick, disabled and dying. Advocacy, promotion of a safe environment, research, participation in health policy development and patient and health system management, and education are also key functions of nursing (Martínez Trujillo et al., 2020).

Nursing, as an integral part of the health care system, encompasses the promotion of health, the prevention of illness and the care of the physically ill, mentally ill and disabled persons of all ages, in all health care and other community settings. Within this broad spectrum of health care, the phenomena of particular concern to nurses are the “individual, family and group responses to actual or potential health problems”. These human responses range from health restoration reactions to an individual episode of illness to the development of policies for the long-term health promotion of a population (Fernández Sola, 2020; Quirino Afonso et al., 2020).

Cancer

Cancer can result from abnormal proliferation of any of a number of different cell types in the body, so there are over a hundred different types of cancer, which can vary substantially in their behavior and response to treatment. The most important issue in cancer pathology is the distinction between benign and malignant tumours (Ramírez et al., 2019).

A tumour is any abnormal proliferation of cells, which may be benign or malignant. A benign tumour, such as a common skin wart, remains confined to its original location, without invading surrounding normal tissue or spreading to distant areas of the body. However, a malignant tumour can invade surrounding normal tissue and spread throughout the body via the circulatory or lymphatic systems (metastasis) (Tinoco-García, 2019).

Terminal cancer

Terminal cancer is cancer that cannot be cured or treated. It is also sometimes called terminal cancer. Any type of cancer can become terminal cancer. Terminal illness, often referred to as a life-limiting illness, refers to a person who has an illness that cannot be cured and will eventually lead to death. A physician often uses a range of days, months or years to predict the life expectancy of a person with a life-limiting illness. If the illness is terminal, it is important to discuss death and plan for the end of life. (Hermosilla-Ávila et al., 2020).
Pain management

Everyone experiences some form of pain from time to time. Pain is the most common symptom of thousands of injuries, illnesses, diseases, disorders and conditions that a person may suffer throughout their life. It can also be the result of treatments for conditions and diseases. The pain may last for a short time and go away as it heals (acute pain). Or it can last for months or years (chronic pain). Anyone with pain can benefit from a pain management plan. A comprehensive plan can help people manage pain that lasts for a few days (for example, after an injury or surgery). It can also help people with long-term pain as a result of a chronic disease or condition (Carrillo-Torres et al., 2019; Esparza-Miñana et al., 2020; Guamba Leiva et al., 2019; Mesas Idáñez et al., 2019).

Against this background, the aim of this article is to identify the role of nursing in the management of pain in patients with terminal cancer, highlighting the valuable contributions that nurses have made to the science and practice of pain through the literature published in recent years, based on the palliative care line of research.

METHODS

Descriptive study based on the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) has been used as a guide for reporting the findings in this systematic review.

Search strategy

In this systematic review, electronic databases were searched. In addition, Google, Google Scholar and reference lists were handsearched. The search terms were “Terminal cancer”, “Pain management”, “Nursing staff”, “Palliative care” and “Palliative care”.

These searches were combined with a Boolean “OR”; “AND” statement to complete the search strategy for each database.

Scielo Ecuador
Nursing Research Journal
Pubmed
Scopus

Study selection criteria

This systematic review included original qualitative, quantitative and mixed articles that met the following general criteria, which were verified by original searches or reference lists in primary research articles, systematic reviews and included synthesis reviews:

Professionals, adult cancer patients, family cares of cancer patients and the general public aged 18-65 years.

Studies focused on cancer, the palliative phase and quality of life.

Studies in English or Spanish.

Original studies.

Protocols and pilot studies, degree theses, opinion articles, pay articles were excluded. In addition, studies in which the population consisted of patients with other types of diseases were excluded. Similarly, articles that deviated from the topic or did not relate to the role of nurses in pain management in patients with terminal cancer were excluded.

Data extraction and synthesis

The extracted data were tabulated, stratified and presented in a results table as follows.

Theme
Author
Year
Study methodology
Results

Population and sample

From all databases, 119 articles were found that appeared to meet the selection criteria based on the abstracts and were independently peer-reviewed. Of these, 31 results were excluded because they did not meet the inclusion criteria. In addition, 29 articles were removed from the analysis because they were not relevant to the main topic. In addition, 25 studies were excluded due to overlaps.

During this initial review, a total of 34 articles were retrieved and analysed, assessed in full text and critically read. Upon re-analysis, four studies in which participants had not been burned were excluded. Finally, 30 articles were selected. To understand the data extraction process, a flow chart is shown in Figure 1.

Figure 1
Study selection

<table>
<thead>
<tr>
<th>N°</th>
<th>Theme</th>
<th>Author</th>
<th>Year</th>
<th>Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Care complexity and place of death in palliative home care</td>
<td>Busquet X, Manresa J, Llobera J.</td>
<td>2022</td>
<td>Descriptive</td>
<td>The use of play therapy in palliative care is explored through case studies, demonstrating the efficacy of play therapy. The study included complementary/alternative medicine (e.g., diet, yoga, tai chi, qigong, meditation, guided imagery, relaxation and deep breathing).</td>
</tr>
<tr>
<td>2</td>
<td>Spinal Cord Stimulation: Beyond Pain Management</td>
<td>Tapia J.</td>
<td>2022</td>
<td>Descriptive</td>
<td>The care plan should also include regular monitoring and reassessment of pain levels and physical performance, as well as mutually agreed goals and expectations.</td>
</tr>
<tr>
<td>3</td>
<td>Supportive care in oncology of the upper aerodigestive tract</td>
<td>Rambeau A, Guilaumé C, Cabé N, Humbert M.</td>
<td>2022</td>
<td>Descriptive</td>
<td>To assess specific elements of pain, the nurses developed and tested an instrument to measure pain management outcomes.</td>
</tr>
<tr>
<td>4</td>
<td>Comparative study between ultrasound-guided thoracic paravertebral block, pectoral nerve block, and erector spinae muscle block for pain management in breast cancer surgeries. Randomized controlled study</td>
<td>Eskandri A, Mahmoud K, Kasemy Z, Mohamed K.</td>
<td>2022</td>
<td>Comparative</td>
<td>Multimodal strategies were originally described for acute pain management, but are also used for chronic pain because they are more rational and balanced and differ from polypharmacy, which often lacks a specific approach.</td>
</tr>
<tr>
<td>5</td>
<td>Leadership facilitation management experience in the last two decades in our center</td>
<td>Pérez I, Martínez L, Piquera P, Port C.</td>
<td>2022</td>
<td>Retrospective</td>
<td>Some aspects of central sensitisation persist even when the peripheral signals that stimulate pain are no longer present. However, both peripheral and central neural mechanisms are involved in central sensitisation, which can lead to long-lasting problems.</td>
</tr>
<tr>
<td>7</td>
<td>Physical therapy after breast cancer surgery improves range of motion and pain over time</td>
<td>Keft M, Pereira D, Bispo F, Bezerra H.</td>
<td>2022</td>
<td>Descriptive</td>
<td>It is important that research findings are not over-generalised. Research findings should only be used to provide more culturally sensitive care and to raise awareness of differences in how different populations respond to self-care interventions.</td>
</tr>
</tbody>
</table>
Elaborated by: Author

**DISCUSSION**

Pain assessment is necessary to determine the nature of the pain. León et al., (2019) identified the possibility that pain may be more prevalent than assumed due to its unique characteristics that may be overlooked when simply measuring pain intensity. Consequently, González et al., (2020) They indicated that in order to increase awareness of symptom severity so that specific interventions for neuropathic pain could be prescribed, educational sessions on pain screening and...
assessment for nurses are needed.

On the other hand, Buitrago et al., (2019) reported on providers' evidence-based assessment and treatment practices for older adults with cancer in community-based hospices. Positive aspects of the study included that most patients had their pain assessed on admission using a valid pain scale and that the primary components of a comprehensive pain assessment had been completed on admission.

Diaz et al., (2019), mentioned that the pain management plan was re-evaluated only one third of the time, and re-evaluation of pain of moderate or higher severity was rarely completed, under this argument, Parra et al., (2020); suggests that oncological pain should be documented as assessed, reassessed or treated in a manner consistent with evidence-based practice recommendations. According to the study carried out by Rambeau et al., (2022), indicate that, to assess the specific components of pain, nurses have developed and tested instruments to measure pain management outcomes. These measure 6 aspects of quality: pain intensity and relief; impact of pain on activity, sleep and negative emotions; side effects of treatment; usefulness of pain management information; ability to participate in treatment decisions; and use of non-pharmacological strategies. (Reguero et al., 2021; Gómez Tarradas et al., 2020).

Thus, pain-directed therapy in recent decades, multimodal pharmacological treatment, is that which combines two or more analgesics from different classes (e.g., opioids with non-opioids and/or adjuvants) targeting more than one pain mechanism. Indeed, it has evolved as a more effective treatment for both acute and chronic cancer pain. Initially described for the treatment of acute pain, multimodal strategies are also applied to chronic pain as they are more rational and balanced, and distinct from polypharmacy, which often lacks targeted approaches (Bautista-Hernández et al., 2021; Eskandr et al., 2022).

According to González et al., (2020), the use of multimodal analgesia requires nurses to understand the physiology and pathophysiology of cancer pain, be aware of the pharmacological properties of analgesics (e.g. onset, peak and duration of action, and adverse effects), ensure timely administration to avoid gaps in analgesia and be aware of potential synergistic adverse effects, while monitoring and managing patients' symptoms.

Meanwhile maximisation of analgesia is shown through observed differences in opioid response which can be explained by patient variability based on the pharmacokinetic and pharmacodynamic properties of opioids, to which variables such as age, concomitant drug treatment and duration of opioid treatment contribute. The practice of rotating patients from one opioid to another due to lack of efficacy or adverse effects necessitates conversions using equianalgesic tables (Chen-Xu et al., 2021). However, caution should always be exercised when converting from one opioid to another, as equianalgesic tables merely serve as a guide to estimate dose equivalence (Alcaraz Asensio et al., 2022).

Given recent advances in pain science and the mechanisms by which acute pain unrelieved by tissue injury can lead to chronic pain, nurses have opted for more complex and robust pain management practices (Álvarez Ossorio et al., 2022). The rationale for aggressive pain management is explained through a cascade of events involving neurotransmitter release and electrophysiological, intracellular stress, structural and neuropsychological responses to acute pain that can potentially lead to central sensitisation, a complex condition defined by an increased excitability of neurons within the peripheral and central nervous systems and abnormal sensitivity and responses to painful and other stimuli (Sanmartí et al., 2019).

Mogollón et al., (2021) consider that postoperative pain should be monitored frequently and treated aggressively. Treatment usually includes opioids, which requires assessment of respiratory status and level of sedation. Opioids also slow peristalsis, so constipation must be prevented. Patients requiring opioid analgesia for 3 days or more should begin a bowel regimen that includes a stimulant laxative, such as senna, to counteract the effects of the opioid. In addition to opioids, non-opioid analgesics and/or anticonvulsants may be used as multimodal approaches to pain management (Carrasco et al., 2020).

Cruz (2019) mentions that the promotion of self-management and the involvement of families in patient-centred pain care through education has been a focus of nursing research. Promoting self-advocacy for pain management requires an understanding of racial, ethnic and cultural influences on learning preferences and treatment methods. However, Rett et al., (2022) believe that it is important to avoid over-generalisations from research findings, which should only be used to guide more culturally sensitive attention and raise awareness of the differences in how various populations respond to self-management approaches.

The role of nurses provides palliative care from diagnosis to the end of life, and their role is evolving into a broader and more inclusive one Noriega et al., (2022). Nursing is not only responsible for assessing, managing and evaluating pain management, but seeks to move into new domains of care, defining, justifying its new and expanded roles both nationally and internationally, and continues to develop evidence-based guidelines to direct patient care in comfort, palliative and end-of-life care settings (Castilla et al., 2021).

According to the results of Sancho et al., (2019) showed that alternative therapies were widely used by cancer patients, and were more prevalent among women, middle-aged, white and well-educated. However, Noriega et al., (2020) stipulate that the use of alternative practices in pain patients did not differ by gender, with patients being more likely to
engage in progressive relaxation or deep breathing exercises when in pain.

CONCLUSIONS

Throughout the continuum of care, from diagnosis to end of life and with cancer survivors, nurses address patient and family issues related to pain; formulate care plans and research programmes to effectively manage pain. Nurses are responsible for assessing pain, using evidence-based practice guidelines in clinical care, applying alternative modalities, evaluating treatments through reassessment and documenting outcomes by demonstrating that they are both clinically and culturally competent enough to use creative assessment skills, clinical judgement, psychological support, and can apply assertive communication in conjunction with medication, nursing care, and non-pharmacological treatments as each patient is unique.

Research conducted by nurses has a profound effect on the advancement of pain science, both in better understanding the experiences of pain and in researching effective ways to treat it. Nurse researchers have been at the forefront of work to develop and test new instruments and approaches to measure pain, to elucidate pain experiences through quantitative and qualitative methodologies, and to measure the quality of pain care for survivors, inpatients and those receiving palliative care at the end of life.

Nurses act as advocates to empower patients to self-manage their pain and provide education and support to patients and families in their most vulnerable moments. It is therefore important for the nursing professional to strengthen their knowledge as medicine is advancing and self-education on topics within this field will help to improve clinical practice with patients. That is why, at the first level of care, nursing plays a fundamental role as they are the main ones to take the role of the caregiver, because at this level is the prevention and relief of ailment through early identification, assessment and treatment of pain.

For this reason, Guevara et al., (2017) mentioned that the place where they are trained as professionals does not disseminate essential content that covers information on care for cancer patients or palliative care, which in turn represents a challenge. Therefore, it is recommended to include protocols that help to improve knowledge and guarantee good care according to their needs.

REFERENCES


The role of nursing in pain management in patients with terminal cancer


### Contribution of each author to the manuscript:

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<td>A. theoretical and conceptual foundations and problematization:</td>
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<td>B. data research and statistical analysis:</td>
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<td>C. elaboration of figures and tables:</td>
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<td>F. Other (please indicate)</td>
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