

Evaluation of pain in cancer patients: A cross-sectional study and review of the literature

Khaoula Alaoui Ismaili, Imane Stitou, Mohammed Ismaili, Oumaima Siyouri, Lamiae Amaadour, Karima Oualla, Zineb Benbrahim, Samia Arifi, Naoufal Mellas

Department of Medical Oncology, Hassan II University Hospital, Fes, Morocco

ABSTRACT

Pain is a common and distressing symptom experienced by many cancer patients. The evaluation of pain in cancer patients is a crucial component of their care, as it allows healthcare professionals to understand the nature and severity of the pain, and develop an appropriate treatment plan. Pain assessment involves not only identifying the physical characteristics of the pain, but also the patient's psychological, social, and cultural factors that can impact their pain experience. By using validated pain assessment tools and taking a holistic approach to pain management, healthcare professionals can improve the quality of life for cancer patients by effectively managing their pain. This can lead to better symptom control, increased patient satisfaction, and improved overall functioning and well-being.

The purpose of this cross-sectional study was to evaluate the prevalence, severity, and management of pain in cancer patients and to review the literature on pain assessment and management in this population.

Key words: cancer pain, pain assessment, pain management, cross-sectional study, literature review

INTRODUCTION

Cancer is a leading cause of morbidity and mortality worldwide, and pain is a common symptom experienced by cancer patients. Pain can result from the disease itself or its treatment and can significantly affect the quality of life and overall well-being of cancer patients. Pain management in cancer patients is often challenging due to the complexity of cancer pain and the potential for adverse effects of analgesics.

The purpose of this study was to evaluate the prevalence, severity, and management of pain in cancer patients and to review the literature on pain assessment and management in this population.

LITERATURE REVIEW

A cross-sectional study was conducted in medical oncology department CHU Hassan II Fes in which cancer patients was evaluated for pain using the Numeric Rating Scale (NRS). The NRS is a simple and widely used tool for assessing pain severity, with scores ranging from 0 (no pain) to 10 (worst imaginable pain). Pain management strategies were recorded, including the type of analgesics used, dose, and frequency of use.

The study also included a review of the literature on pain assessment and management in cancer patients.

The study included 100 cancer patients, of whom 63% reported experiencing pain. The average pain score on the NRS was 6.5 out of 10. The most common types of pain reported were dull aching pain (52%) and sharp shooting pain (28%). The majority of patients (72%) reported using analgesics for pain management, with the most common analgesics being nonsteroidal anti-inflammatory drugs (NSAIDs) (40%) and opioids (30%) (Table 1).

The literature review revealed that pain assessment and management in cancer patients can be challenging due to the complexity of cancer pain and the potential for adverse effects of analgesics. Several tools have been developed for pain assessment in cancer patients, including the Brief Pain Inventory (BPI) of figure 1 and the Edmonton Symptom Assessment System (ESAS) of figure 2. The BPI is a multidimensional tool that assesses pain severity, interference with daily activities, and pain relief. The ESAS is a simple and quick tool that assesses multiple symptoms, including pain, nausea, fatigue, and anxiety. Both tools have been shown to be reliable and valid in assessing pain in cancer patients.

Address for correspondence: Khaoula Alaoui Ismaili, Department of Medical Oncology, Hassan II University Hospital, Fes, Morocco, Email: alaoui.khaoula01@gmail.com

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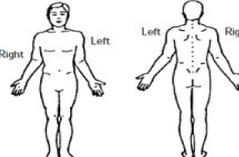
Tab. 1. Characteristic of patients study.

Characteristic	n	%	
Gender	Male	45	45%
	Female	55	55%
Age	18-44	10	10%
	45-64	40	40%
	65-84	45	45%
	>85	5	5%
	Breast	25	25%
Cancer Type	Lung	20	20%
	Prostate	15	15%
	Colorectal	10	10%
Pain Severity	Other	30	30%
	Mild	15	15%
	Moderate	45	45%
Type of Pain	Severe	40	40%
	Dull aching	52	52%
	Sharp shooting	28	28%
Analgesics Used	Burning	10	10%
	Other	10	10%
	NSAIDs	40	40%
	Opioids	30	30%
	Acetaminophen	20	20%
Adjuvant meds	10	10%	

Date: ___/___/___ Time: _____
 Name: _____
 Last First Middle initial

1) Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?
 1. Yes 2. No

2) On the diagram, shade in the areas where you feel pain. Put an X on the area that hurts the most.



3) Please rate your pain by circling the one number that best describes your pain at its **worst** in the past 24 hours.
 0 1 2 3 4 5 6 7 8 9 10
 No Pain as bad as you can imagine

4) Please rate your pain by circling the one number that best describes your pain at its **least** in the past 24 hours.
 0 1 2 3 4 5 6 7 8 9 10
 No Pain as bad as you can imagine

5) Please rate your pain by circling the one number that best describes your pain on **average**.
 0 1 2 3 4 5 6 7 8 9 10
 No Pain as bad as you can imagine

6) Please rate your pain by circling the one number that tells how much pain you have **right now**.
 0 1 2 3 4 5 6 7 8 9 10
 No Pain as bad as you can imagine

7) What treatments or medications are you receiving for your pain?

8) In the past 24 hours, how much **relief** have pain treatments or medications provided? Please circle the one percentage that most shows how much relief you have received.
 0% 10 20 30 40 50 60 70 80 90 100%
 No Complete relief

9) Circle the one number that describes how, during the past 24 hours, pain has **interfered** with your:
 A. General activity
 0 1 2 3 4 5 6 7 8 9 10
 Does not Completely interfere

B. Mood
 0 1 2 3 4 5 6 7 8 9 10
 Does not Completely interfere

C. Walking ability
 0 1 2 3 4 5 6 7 8 9 10
 Does not Completely interfere

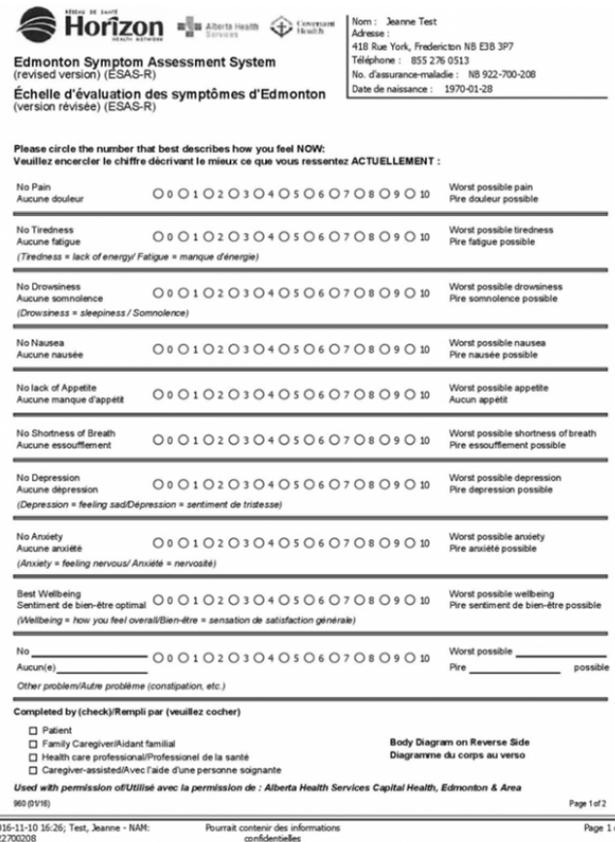
D. Normal work (includes both work outside the home and housework)
 0 1 2 3 4 5 6 7 8 9 10
 Does not Completely interfere

E. Relations with other people
 0 1 2 3 4 5 6 7 8 9 10
 Does not Completely interfere

F. Sleep
 0 1 2 3 4 5 6 7 8 9 10
 Does not Completely interfere

G. Enjoyment of life
 0 1 2 3 4 5 6 7 8 9 10
 Does not Completely interfere

Fig. 1. The Brief Pain Inventory (BPI)



Horizon Alberta Health Services Edmonton Health
Edmonton Symptom Assessment System (revised version) (ESAS-R)
Échelle d'évaluation des symptômes d'Edmonton (version révisée) (ESAS-R)

Nom : Jeanne Test
 Adresse : 418 Rue York, Fredericton NB E3B 3P7
 Telephone : 855 276 0513
 No. d'assurance-maladie : NB 922-700-208
 Date de naissance : 1970-01-28

Please circle the number that best describes how you feel NOW:
 Veuillez encadrer le chiffre décrivant le mieux ce que vous ressentez ACTUELLEMENT :

No Pain / Aucune douleur 0 1 2 3 4 5 6 7 8 9 10 Worst possible pain / Pire douleur possible

No Tiredness / Aucune fatigue 0 1 2 3 4 5 6 7 8 9 10 Worst possible tiredness / Pire fatigue possible
 (Tiredness = lack of energy/ Fatigue = manque d'énergie)

No Drowsiness / Aucune somnolence 0 1 2 3 4 5 6 7 8 9 10 Worst possible drowsiness / Pire somnolence possible
 (Drowsiness = sleepiness/ Somnolence)

No Nausea / Aucune nausée 0 1 2 3 4 5 6 7 8 9 10 Worst possible nausea / Pire nausée possible

No lack of Appetite / Aucune manque d'appétit 0 1 2 3 4 5 6 7 8 9 10 Worst possible appetite / Aucun appétit

No Shortness of Breath / Aucune essoufflement 0 1 2 3 4 5 6 7 8 9 10 Worst possible shortness of breath / Pire essoufflement possible

No Depression / Aucune dépression 0 1 2 3 4 5 6 7 8 9 10 Worst possible depression / Pire dépression possible
 (Depression = feeling sad/ Dépression = sentiment de tristesse)

No Anxiety / Aucune anxiété 0 1 2 3 4 5 6 7 8 9 10 Worst possible anxiety / Pire anxiété possible
 (Anxiety = feeling nervous/ Anxiété = nervosité)

Best Wellbeing / Sentiment de bien-être optimal 0 1 2 3 4 5 6 7 8 9 10 Worst possible wellbeing / Pire sentiment de bien-être possible
 (Wellbeing = how you feel overall/ Bien-être = sensation de satisfaction générale)

No / Aucun(e) 0 1 2 3 4 5 6 7 8 9 10 Worst possible / Pire possible

Other problems/ Autre problème (constipation, etc.)

Completed by (check)/ Rempli par (veuillez cocher)
 Patient
 Family Caregiver/ Aidant familial
 Health care professional/ Professionnel de la santé
 Caregiver-assisted/ Avec l'aide d'une personne soignante

Body Diagram on Reverse Side / Diagramme du corps au verso

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Fig. 2. Edmonton Symptom Assessment System (ESAS)

DISCUSSION

The present study aimed to evaluate pain in cancer patients and to review the literature on pain assessment and management in cancer patients. The study findings revealed that pain is a common problem among cancer patients, with the majority of patients experiencing moderate to severe pain. This is consistent with previous studies reporting that up to 70% of cancer patients experience pain [1].

The study also found that the most common types of pain reported by cancer patients were dull aching pain and sharp shooting pain, which is consistent with the literature. The use of analgesics for pain management was also high among the study participants, with NSAIDs and opioids being the most commonly used

analgesics. This is consistent with the literature, which suggests that opioids are the mainstay of treatment for moderate to severe cancer pain [2].

The management of cancer pain is an important part of cancer care, and it involves a multidisciplinary approach that includes pharmacological and non-pharmacological interventions. Pharmacological interventions include opioids, Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), and adjuvant medications such as antidepressants and anticonvulsants. Non-pharmacological

interventions include physical therapy, relaxation techniques, and cognitive-behavioural therapy [1].

There are various guidelines and recommendations for the management of cancer pain, including those by the World Health Organization (WHO) and the American Pain Society (APS). The WHO's analgesic ladder is a widely used approach to cancer pain management, which involves starting with non-opioid analgesics and progressing to stronger opioids as needed [3]. The APS has also developed guidelines for the use of opioids in the treatment of chronic pain, including cancer pain.

Cancer pain can be complex and multifactorial, and it can affect patients physically, emotionally, and socially. Therefore, an effective pain management strategy should be individualized, patient-centred, and based on a comprehensive pain assessment. A pain assessment typically includes evaluating the location, intensity, quality, duration, and impact of pain on the patient's daily activities, as well as any factors that may exacerbate or alleviate the pain [4].

Pharmacological interventions are often the first line of treatment for cancer pain, and opioids are the most commonly used analgesics for moderate to severe pain. Opioids work by binding to specific receptors in the brain and spinal cord, thereby reducing the transmission of pain signals. However, opioids can have side effects such as nausea, constipation, sedation, and respiratory depression, and they can also be associated with the risk of addiction and abuse [4,5].

Non-opioid analgesics such as NSAIDs, acetaminophen, and corticosteroids can also be used alone or in combination with opioids to provide pain relief. Adjuvant medications such as

antidepressants and anticonvulsants can also be used to treat neuropathic pain, which is often difficult to manage with opioids alone [4,5].

Non-pharmacological interventions can also be helpful in managing cancer pain. Physical therapy, including exercises and stretching, can help relieve muscle tension and improve mobility. Relaxation techniques such as deep breathing, meditation, and guided imagery can help reduce anxiety and stress, which can exacerbate pain. Cognitive-behavioural therapy, which involves changing negative thoughts and behaviours related to pain, can also be effective in reducing pain severity and improving quality of life [6].

In addition to medication and non-medication interventions, cancer pain management may also involve invasive procedures such as nerve blocks, radiation therapy, and surgery. These interventions may be recommended when other treatments have not been effective or when the pain is localized to a specific area [4-6].

CONCLUSION

Pain is a common and significant problem for cancer patients, affecting their quality of life and overall well-being. Assessment and management of cancer pain should be comprehensive and individualized, considering the nature and severity of pain, potential adverse effects of analgesics, and patients' preferences and values. Nonpharmacologic interventions should also be considered as part of pain management strategies for cancer patients. Further research is needed to identify optimal pain assessment and management strategies for different types of cancer pain and to improve the overall quality of care for cancer patients.

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