

CARACTERIZAÇÃO DE PACIENTES SOB CUIDADOS PALIATIVOS SUBMETIDOS À PUNÇÃO VENOSA PERIFÉRICA E À HIPODERMÓCLISE

CHARACTERIZATION OF PATIENTS UNDER PALLIATIVE CARE SUBMITTED TO PERIPHERAL VENIPUNCTURE AND HYPODERMOCLYSIS

CARACTERIZACIÓN DE PACIENTES EN ATENCIÓN PALIATIVA SOMETIDOS A UNA PUNCIÓN VENOSA PERIFÉRICA E HIPODERMOCLISIS

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RESUMO

Objetivo: caracterizar os pacientes oncológicos internados sob cuidados paliativos submetidos à punção venosa periférica e a hipodermoclise, segundo as variáveis sociodemográficas e clínicas. **Método:** estudo observacional, descritivo e prospectivo. Foram realizadas entrevistas com o paciente e/ou seu cuidador, consulta ao prontuário, avaliação e acompanhamento diário da punção.

Resultados: participaram do estudo 45 pacientes de ambos os sexos e com idade superior a 18 anos. A avaliação funcional dos pacientes, no momento da internação, foi de 30%, indicando pacientes extremamente incapacitados e com necessidade de hospitalização. Os sintomas mais frequentes apresentados pelos pacientes no dia da internação foram inapetência, sonolência, fadiga, dispneia e dor. O número de punções venosas periféricas foi superior ao número de hipodermoclises realizadas. **Conclusão:** os dados analisados permitiram caracterizar o perfil de pacientes oncológicos internados sob cuidados paliativos e a terapêutica adotada para a terapia medicamentosa. Pôde-se, ainda, identificar a baixa adesão da equipe à realização da hipodermoclise, o que remete à necessidade da realização de mais estudos com altos níveis de evidência para embasar a prática assistencial da equipe de enfermagem e contribuir para a qualidade de vida do paciente.

Descritores: Cuidados Paliativos; Hipodermoclise; Infusões Subcutâneas; Cateterismo Periférico; Enfermagem.

ABSTRACT

Objective: to characterize cancer patients hospitalized under palliative care undergoing peripheral venipuncture and hypodermoclysis according to sociodemographic and clinical variables. **Method:** observational, descriptive and prospective study. Data were collected through interviews with patients and/or their caregivers, consultation of the medical record, and evaluation and daily monitoring of the puncture. **Results:** forty-five patients of both sexes and over 18 years old participated in the study. The functional assessment of patients at the time of admission was 30%, indicating extremely disabled patients and in need of hospitalization. The most frequent symptoms presented by patients on the day of hospitalization were lack of appetite, drowsiness, fatigue, dyspnea and pain. The number of cases of peripheral venipuncture was higher than the number of cases of hypodermoclysis.

Conclusion: the analyzed data allowed the characterization of the profile of cancer patients hospitalized under palliative care and the therapy adopted for drug therapy. It was also possible to identify the low adherence of the team to the performance of hypodermoclysis, which refers to the need for further studies with high levels of evidence to support the care practice of the nursing team and contribute to the patients' quality of life.

Descriptors: Palliative Care; Hypodermoclysis; Subcutaneous infusions; Peripheral catheterization; Nursing.

RESUMEN

Objetivo: caracterizar los pacientes con cáncer hospitalizados bajo cuidados paliativos, que se sometieron a venopunción periférica e hipodermocclisis de acuerdo con variables sociodemográficas y clínicas. **Método:** estudio observacional, descriptivo y prospectivo. Se realizaron entrevistas con el paciente y / o su cuidador, consulta de historias clínicas, evaluación y seguimiento diario de la punción.

Resultados: 45 pacientes de ambos sexos y mayores de 18 años participaron en el estudio. La evaluación funcional de los pacientes al ingreso fue del 30%, lo que indica pacientes extremadamente discapacitados y que necesitan hospitalización. Los síntomas más frecuentes que presentaron el día de la hospitalización fueron: falta de apetito, somnolencia, fatiga, disnea y dolor. El número de punciones venosas periféricas fue mayor que el número de hipodermocclisis realizado. **Conclusión:** los datos analizados permitieron caracterizar el perfil de pacientes con cáncer hospitalizados bajo cuidados paliativos y el tratamiento adoptado para la terapia farmacológica. También fue posible identificar la baja adhesión del equipo a la realización de la hipodermocclisis, lo que remite a la necesidad de realizar más estudios con altos niveles de evidencia para apoyar la práctica de atención del equipo de enfermería y contribuir a la calidad de vida del paciente.

Descriptores: Cuidados Paliativos; Hipodermocclisis; Infusiones Subcutáneas; Cateterismo Periférico; Enfermería.

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INTRODUCTION

Cancer has occupied a prominent place among chronic non-communicable diseases. When in an advanced stage, the evolution of the disease is accompanied by signs and symptoms that are difficult to control, such as pain, nausea, vomiting, anorexia, fatigue, depression, anxiety, constipation, among others⁽¹⁾. Furthermore, cancer patients in an advanced stages of the disease frequently lose functionality, contributing to the profound physical, emotional and spiritual changes experienced since diagnosis until death⁽²⁾. In this sense, the provision of palliative care has a positive impact on the control of symptoms and on the improvement of patients' quality of life.

Thus, the discussion of alternative methods, such as the use of the subcutaneous route for administration of drug therapy, is an increasingly appropriate practice. This route is indicated for the administration of drugs and rehydration solutions when the intravenous and oral routes are limited and invasive procedures are contraindicated⁽³⁾.

The use of the subcutaneous route through hypodermoclysis is considered a viable and safe alternative without serious complications; however, this technique is still little known and used in the hospital scenario. There are several questions regarding the technique, the medications and fluids that can be administered with safety, the maximum volume and speed of infusion allowed, among other aspects⁽⁴⁻⁶⁾.

Hypodermoclysis consists of the administration of drugs and fluids in the subcutaneous space, either continuously or intermittently⁽³⁾. The subcutaneous route is the possible route to be used, mainly, in elderly patients and under palliative care, who often present conditions that prevent the maintenance of adequate levels of hydration and nutrition and therefore need alternative routes for clinical support⁽⁷⁾.

However, in the current clinical practice of nurses for patients in palliative care, parenteral administration of drugs and solutions is done, primarily, by the intravenous route, even when, to install this access route, the patient has to be subjected to numerous punctures and be exposed to a greater risk of bloodstream infection, and despite the fact that the subcutaneous route is a viable, safe, more comfortable and less expensive option. Moreover, maintaining a peripheral venous catheter requires greater effort and care

and involves a greater risk of complications, compromising patient safety⁽⁸⁾.

This study aimed to characterize cancer patients hospitalized under palliative care who underwent peripheral venipuncture and hypodermoclysis according to sociodemographic and clinical variables.

MATERIAL AND METHOD

This is an observational, descriptive study with prospective follow-up, carried out from January to May 2019, in the medical clinic ward of a university hospital in the countryside of São Paulo.

A non-probabilistic and consecutive sample consisted of 45 patients who met the following inclusion criteria: being a cancer patient, being hospitalized under palliative care, of any sex, aged over 18 years, and in need of puncture for parenteral drug therapy during hospitalization.

Data were collected through interviews with patients or their legal guardians, consultation of medical records, evaluation and daily monitoring of the puncture (intravenous or subcutaneous), since puncturing until the moment when there was no further indication (suspension of parenteral medication, hospital discharge, or patient death). For this study, a questionnaire was used to obtain sociodemographic and clinical variables; the Karnofsky Performance Status (KPS)⁽⁹⁾ scale was used for the functional assessment of the participants; the Edmonton Symptom Assessment Scale - BR (ESAS-Br)⁽¹⁰⁾ for the identification of signs and symptoms presented by patients; and a guide was used for daily assessment and monitoring of the puncture.

The research project was prepared in accordance with the provisions of Resolution NHC 466/12⁽¹¹⁾ and was approved by the Research Ethics Committee of the Ribeirão Preto School of Nursing, University of São Paulo, under CAAE: 91320318.1.0000.5393 and Opinion number 2,907,347. Patients were invited to participate in the research and data collection was only performed after their consent and signing of the Informed Consent Form.

Simple frequencies were calculated for nominal or categorical variables and measures of central tendency (mean and median) and dispersion (standard deviation) were performed for continuous variables.

RESULTS AND DISCUSSION

The sample of this study was characterized by the predominance of males (62.22%) and with a mean age of 66.56 years (SD = 14.01). The most common oncological diagnoses in this study were lung cancer and colorectal cancer corresponding to 20.00% and 15.56%, respectively, and the most frequent comorbidity presented by the participants was systemic arterial hypertension (20; 44.44%).

Among the participants who had metastasis, most had liver (8; 17.78%), pulmonary (6; 13.33%) and bone (5; 11.11%) metastasis. With regard to the disease-modifying therapy implemented prior to the indication of palliative care, 61.36% of the patients underwent chemotherapy and 56.82%, radiotherapy.

Among the symptoms presented by patients on the day of hospitalization, most had

lack of appetite (39; 86.60%), drowsiness (37; 82.20%), fatigue (36; 80.00%), dyspnea (24; 53.30%), and moderate to severe pain (21; 46.60%).

The medications most used by patients during hospitalization were: dipyron (31; 15.12%), morphine (27; 13.17%), ondansetron (23; 11.21%) and dexamethasone (21; 10.24%).

Altogether, 134 punctures were performed in this sample during the hospitalization period. There was a mean of two attempts of peripheral venipuncture per patient and the number of hypodermoclysis was substantially lower than that of venipuncture.

The other sociodemographic and clinical characteristics of the patients are described in Table 1.

Table 1 - Sociodemographic and clinical characterization of cancer patients hospitalized under palliative care. Ribeirão Preto - SP, 2019. (n = 45).

Variable	Mean (SD)	n (%)
Sex		
Male		28 (62.22)
Female		17 (37.78)
Age (years)	66.56 (14.01)	
Marital status		
Married/Consensual Union		21 (46.67)
Not married		8 (17.78)
Separated/Divorced		8 (17.78)
Widowed		8 (17.78)
Schooling (years)	4.81 (2.60)	
Main caregiver		
Son/daughter		18 (40.00)
Wife/husband/spouse		14 (31.11)
Another family member		12 (26.67)
Non-family member		1 (2.22)
Age of the caregiver (years)	47.62 (16.85)	
Schooling of the caregiver	8.02 (4.10)	
Underlying cancer		
Lung cancer		9 (20)
Colorectal cancer		7 (15.56)
Breast cancer		5 (11.11)
Esophageal cancer		4 (8.89)
Metastasis		
Liver		8 (17.78)
Pulmonary		6 (13.33)
Bone		5 (11.11)
Lymph nodes		3 (6.67)
Disease-modifying treatment		
Chemotherapy		27 (61.36)
Radiotherapy		25 (56.82)
Surgery		20 (44.44)
Treatment virgin		11 (25.00)
Hormone therapy		2 (4.55)

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Variable	Mean (SD)	n (%)
KPS		

30%	20 (44.40)
40%	10 (22.20)
20%	6 (13.30)
50%	4 (8.90)
60%	2 (4.40)
70%	2 (4.40)
10%	1 (2.20)

Source: study data.

Table 2 shows data related to the observed punctures.

Table 2 - Characterization of the punctures to which the patients were submitted during hospitalization. Ribeirão Preto - SP, 2019. (n = 134).

Variable	n (%)
Puncture type	
Peripheral venipuncture	117 (87.00)
Hypodermoclysis	17 (13.00)
Puncture purpose	
Analgesia	23 (30.00)
Antibiotic therapy	23 (30.00)
Attempts to venipuncture to obtain venous access	
One	42 (41.00)
Two	23 (22.00)
Three	5 (4.00)
Four	4 (3.00)
Five	2 (1.00)
Six	25 (24.00)
SC puncture site *	
Abdominal region	6 (35.00)
Anterolateral thigh flap	6 (35.00)
Deltoid region	5 (29.00)

Source: study data.

This study sought to characterize cancer patients hospitalized under palliative care who underwent peripheral venipuncture and hypodermoclysis according to sociodemographic and clinical variables.

In this sense, the study identified a higher prevalence of males. This result is in agreement with the literature, which shows that the incidence of cancer in developing countries in the 2018-2019 biennium was higher in males than in females, with incidence rates corresponding to 217.27/100 thousand inhabitants and 191.78/100 thousand, respectively⁽¹²⁾.

The age of the participants in this study ranged from 22 to 93 years, with an average of 66 years (SD = 14). The literature estimates that in 2030, the global burden will be 21.4 million new cases of cancer and 13.2 million deaths from cancer as a result of the growth and aging of the population associated with the reduction of

deaths from infectious diseases and infant mortality in developing countries⁽¹³⁾.

The most evident medical diagnosis in the study was lung cancer (20.00%) followed by colorectal cancer (15.56%) and female breast cancer (11.11%). This is partially different from literature findings on subject, since studies show that in 2012, in developing countries, the most common types of cancer in males were lung, stomach and liver cancer. In Brazil, the most common cancers in males are prostate, lung and colorectal cancer. However, prostate cancer has a profile characterized by lower mortality and long survival. With regard to the female population, the most incident were breast, cervical and lung cancer. In 2018, estimates of new cases of lung cancer were 31,270, with 18,740 men and 12,530 women. The number of expected deaths in individuals with this diagnosis is 27,931, being 16,139 men and 11,792 women⁽¹⁴⁻¹⁷⁾.

This study showed that the most incident site of metastasis was liver; up to 35% of patients who die from some type of cancer tend to have liver metastasis during the progression of the disease, and the most common types of cancer that evolve to liver metastasis are pancreatic carcinoma, colorectal carcinoma, stomach carcinoma, breast carcinoma, esophageal carcinoma, lung carcinoma and carcinoid tumor⁽¹⁵⁾.

Regarding the functional assessment of the patient during hospitalization, the study identified a higher frequency of KPS of 30%, which corresponds to patients in advanced stage of the disease, extremely disabled and, although death was not imminent, they needed alternative methods to reduce suffering⁽⁹⁾. In other words, the cancer patients in palliative care in this study had been hospitalized with a very poor health condition. The impairment in functional capacity resulting from cancer and the progress of the disease affect the patients' ability to perform activities of daily living, interfering in their social relationships and negatively impacting their quality of life⁽¹⁾. Such aspects should be considered

when promoting humanized care for this patient profile during hospitalization.

With regard to the therapy adopted for the administration of parenteral drugs, this study identified a significant discrepancy between the number of peripheral venipuncture (87.00%) and hypodermoclysis (13.00%) during the hospitalization of patients.

The number of attempts to obtain peripheral venous access was noteworthy; in the majority of the cases, access was obtained in the first attempt (41%), and the second most common case involved six attempts. This fact is in disagreement with the recommendations of the National Health Surveillance Agency (ANVISA), which advises two attempts of peripheral venipuncture by a health professional and a maximum of four attempts per patient⁽¹⁶⁾.

The multiple puncture attempts not only cause pain and discomfort to the patient but also delay the start of the drug infusion, damage the venous network, and increase the costs and risks of complications. Patients with compromised venous network, like the participants of the present study, must undergo a careful multidisciplinary assessment in order to discuss viable access options.

From a technical point of view, the realization and maintenance of a subcutaneous puncture is easier and has lower cost than an intravenous puncture; this option should be considered when patients have difficult venous access⁽¹⁸⁾.

It was observed that nursing professionals choose the intravenous route to the detriment of the subcutaneous route even when patients have to be subjected to numerous attempts of venipuncture, compromising their quality of life. These results may be related to the fact that hypodermoclysis is a technique that is not widespread in the professional and academic environment yet, particularly in the case of patients who cannot use the traditional routes for administration of drugs and or solutions, as evidenced in the literature^(17,19-21). Still, there is little evidence in the literature about the benefits of hypodermoclysis for this patient profile⁽²²⁾.

In the present study, the most frequent sites of choice for performing hypodermoclysis were the abdominal region and the anterolateral thigh flap (35% each). Studies show that the most used sites are the thoracic region and the lateral abdominal wall. The regions that allow the administration of greatest infusion volume are the

anterolateral thigh flap, the abdominal region, and the intra-scapular region, with the maximum volume tolerated by each site of 1500 ml, 1000 ml and 1000 ml in 24 hours, respectively. It is worth mentioning that the total volume infused subcutaneously should not exceed 3000 ml in 24 hours⁽⁸⁾.

The main purposes of the punctures observed were analgesia and antibiotic therapy. The most frequently administered drugs were dipyrone (31.00%), morphine (27.00%), and ondansetron (23.00%). Antibiotics, in general, corresponded to 15.12% of the most frequently prescribed drugs. These results are in line with the literature on the subject, which shows that puncture in cancer patients in palliative care is mainly indicated for relief of the symptoms resulting from progression of the disease^(4,8).

Still, with regard to the signs and symptoms presented by the study patients on the day of hospitalization, uncomfortable symptoms such as lack of appetite, drowsiness, fatigue, dyspnea and pain were very frequent, compromising their quality of life and comfort. Symptom control is an important challenge for the health team assisting patients with cancer in advanced stages and sometimes the difficult management directly impacts the quality of life of patients⁽²³⁾.

CONCLUSION

The analyzed data allowed to characterize the profile of cancer patients hospitalized under palliative care and the method adopted for drug therapy. Thus, the importance of the study is related to the possibility of planning the best strategy for obtaining a route for the administration of parenteral drugs, according to the limitations and needs presented by this profile of patients, greatly contributing to the quality of life of the patients in palliative care during hospitalization. Knowing the profile of cancer patients under palliative care and who need a puncture for drug therapy allows professionals to take such aspects into consideration when choosing the most appropriate route, considering their profile in order to minimize discomforts inherent to each technique and, by doing so, promote their quality of life.

Still, it was possible to identify in this study the low adherence of the team to the realization of hypodermoclysis, a fact that may be related to the lack of knowledge about the technique by the health professionals, little evidence published about its benefits, and to the technique itself.

Thus, it is necessary to carry out more studies with high levels of evidence to support the care practice of the nursing team, favoring the use of the subcutaneous route, especially among patients with a profile similar to those of the present study, contributing to a better quality of life for these patients.

One of the limitations of the study was to the low number of realization of hypodermoclysis observed during the study period. This prevented some types of analysis, such as association between the type of puncture and patient's functionality, which could allow verifying if patients with worse functionality were preferentially submitted to subcutaneous puncture, a fact that, in clinical practice, is possible but has no scientific proof.

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