


Palliative care for end-of-life patients in a basic emergency service

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This research sought to describe the care provided by the nursing staff of the Western Department of the Basic Emergency Service for end-of-life patients. This was a retrospective, quantitative, exploratory and descriptive (level I) study, which sought to research the nursing records of 83 patients from admission to death. Patients who met the following inclusion criteria were considered eligible: adults; had an oncological or nononcological, advanced and irreversible chronic disease; and died in the Basic Emergency Service in the period from January 2011 to December 2012. An instrument was created for data collection, the content, relevance and adequacy of which was validated by a panel of experts in the area of palliative care. The study protocol was approved by the Institutional Ethics Committee. The main results indicate that the majority of patients died in the Observation

Room in a period between the first two and twenty-four hours. Nursing interventions favoured technical-instrumental care related to medical prescriptions and service routines such as venous punctures, catheterisations, taking blood samples for analysis, aspiration of secretions, intravenous administration of fluids and drugs for symptomatic control, and monitoring of vital parameters and the state of consciousness. With the proximity of death, the nurses favoured the registration of cardiorespiratory arrest, cardiopulmonary resuscitation manoeuvres and aspiration of secretions. In the recognition of predictive factors of imminent death, the nurses favoured the patient's entry into a comatose state and aggravation of asthenia. In most patients, the entry into agony phase was not diagnosed.

Keywords: chronic disease, terminally ill, patient care, emergency service, palliative care, end-of-life.

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Introduction

Progress in medicine, improved health care and improved life conditions, among other reasons, have contributed to an extended life span, which may be associated with an increase in oncological and nononcological chronic diseases, comorbidity and a higher demand for health care with multiple and repeated hospital admissions (1, 2). The inevitability of the progressive loss of functional capacities and the symptomatic dislocation (pain, dyspnoea,...) experienced by patients in the final phase of their lives leads them to the emergency room (ER) in a desperate search for relief from suffering and

symptomatic control through active life-support treatments with the expectation of prolonging life (3, 4). But the evidence and research show that these patients end up dying in a hospital setting, in a professionalised and 'medicalised' way (4–6), which is the result of the ER health teams' investment in the healing process.

Studies have shown that bereaved relatives report retrospectively that most terminally ill cancer patients wish to die at home. However, the preference weakened significantly as death approached (7). Another study showed that socio-economic factors such as gender, level of income and size of community were associated with a preference for dying at home. However, despite these preferences, the majority of patients in Western countries die in the hospital (8).

The investment in curing and postponing death led health professionals (HP) to believe that they could control it, so the end-of-life therapeutic approach towards these patients with progressive, incurable, irreversible chronic disease has been a difficult challenge for HP in

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the ER, who are 'trained' to cure and reverse the death process (4, 9, 10). Such actions 'demand' from the HP a therapeutic response that goes through therapeutic measures without curative intent, but which seek to minimise suffering and promote patients' overall well-being. These are known as 'palliative actions', according to the palliative care (PC) paradigm. In this sense, it is necessary for the HP to recognise and diagnose the patient's entry into agony or the end-of-life (EOL) phase so that it is possible to reconcile curative care with palliative actions (3).

At the time of this study, few theoretically supported studies were found. Some Portuguese studies on inpatient PC and articles and studies published in the United States and Anglo-Saxon countries were selected (11–13).

Aims

This research sought to describe the care provided by the nursing staff of the Western Department of the Basic Emergency Service for end-of-life patients.

Methods

Design

This study used a retrospective, quantitative, exploratory and descriptive (level I) design.

Participants

Patients who were admitted to the BES during the period between 1 January 2011 and 31 December 2012, who died in the service in less than one week (<1 hour to 5 days) after their admission, were selected. The following patients were excluded from this study: children or teenagers; individuals who presented cardiorespiratory arrest upon admission; and patients in the agony phase but who were transferred to the Medical Service. To select the sample, the following steps were followed: first, list all patients who died in the BES, in the period under consideration, producing a total of 130; second, remove from the list the individuals certified dead on arrival; third, create a final list of individuals who died in the BES within the period under consideration; and fourth, sort emergency records and nursing records (on paper).

Data collection

To collect the data, a checklist was created based on the LCP and some articles used for the theoretical framework and subjected to evaluation by a panel of nine experts as to the checklist items' pertinence and suitability: Suitable/Pertinent = 1; Neutral = 0; and Not suitable/Not pertinent = -1. The grid consists of three parts: (i)

sociodemographic characterisation, clinical data and admission and death records; (ii) initial assessment of symptoms and clinical status of the patient upon arrival at the BES; and (iii) characterisation of the nursing interventions regarding invasive procedures, medication, routine care, psychosocial support given to the patient and family, evolution of the clinical state and symptoms with the approach of death, identification of the agony phase and explicit reference (or lack thereof) to the diagnosis of agony.

The choice of the Liverpool Care Pathway (LCP) translated into Portuguese (11) as a guideline for the elaboration of the data collection instrument was due to the fact that it is a guiding instrument for the admission of patients into EOL regardless of the diagnosis, which helps the team to consistently recognise when the patient has entered an active and irrevocable EOL phase and to anticipate and control symptoms, take comfort measures, discontinue inappropriate interventions and provide spiritual and religious support to the patient and family (14–16).

Ethical procedures

The study protocol was approved by the Institutional Ethics Committee (number 27/03/2013).

Data analysis

The data were subjected to statistical processing (descriptive statistics) using the SPSS (Statistical Package for the Social Sciences) version 18 for Windows, and the answers to the open-ended questions were subjected to content analysis (17).

Results

The results show that the study population was mostly female (54.2%), married (71.7%), with a mean age of 77.8 ± 11.0 years (median=80 years) and multiple oncological and nononcological pathologies (43.6% with between three and five associated pathologies). The main symptoms presented by patients at the time of admission were as follows: prostration/hyporesponsiveness (62.7%), dyspnoea/polypnoea/superficial respiration (61.4%), oedema (51.8%), pain/moaning/wailing (47.0%), verbal communication maintained (49.5%), oliguria/anuria (34.9%), respiratory secretions/noisy/rattle and distended abdomen (30.1%), agitation (18.1%) and disorientation/confusion (19.3%); and 60.2% of patients died in two hours to one day of hospitalisation in the Observation Room (OR). Nursing interventions (NI) encompassed different areas:

1 Invasive procedures showed the use of IV medication and serum therapy (98.8%), catheterisation for urine

output control (56.6%), routine blood samples (54.2%), use of the subcutaneous (SC) route for medication (heparin and/or insulin) (44.6%) and catheterisation for symptomatic relief (13.3%).

- 2 The administration of therapy showed a prevalence of the use of serum therapy (98.8%), followed by the use of SOS medication for symptomatic control (66.3%), antibiotics (49.4%), analgesics with an hourly prescription (37.3%), IV opioids (33.7%), heparin (32.5%), insulin (21.7%), neuroleptics (19.3%), benzodiazepines (13.3%), 'other drugs' (80.7%), and less prevalent use of vasoactive amines (9.6%), antisecretory antimuscarinic (3.6%), transfusion blood and other blood derivatives (2.4%). In 14.5% of patients, medication considered nonessential was suspended, and in 83.1%, there was no record of this decision.
- 3 The care provided was mainly technical-instrumental interventions based on medical prescriptions (Table 1).
- 4 The psycho-emotional, spiritual and social support provided to the patient/family refers to permission for the

presence of the patient's family (48.2%), confirmation of the contact details of family members who were available within 24 hours (39.8%), information on the patient's clinical status and imminent death (30.1%), and information about the nursing care plan (20.5%); records were not found on the family's social needs and their expressed will not to resuscitate the patient.

- 5 With the proximity of death, the nurses favoured the registration of cardiorespiratory arrest (96.4%) (Table 2) and the NI were the following: cardiopulmonary resuscitation manoeuvres (26.3%), aspiration of secretions (21.1%), peripheral cooling (18.4%) and use of high-debit oxygen therapy and aid in orotracheal intubation (8.0%).
- 6 NI postdeath records included routine procedures in the service: confirmed obituary by the physician (26.8%), records of death (25.1%), care of the deceased's body (16.7%), information passed on to the family (10.0%) and the administrative procedure with documentation (8.8%).
- 7 Upon recognition of predictive factors of imminent death, the nurses favoured the patient's entry into a comatose state (94%) and aggravation of asthenia (85.4%) (Table 3).
- 8 Records show that in 71.1% of patients, the diagnosis of agony was not made, unlike the 2.9% of patients for whom nurses explicitly registered the entry into the agony phase despite the recognition of at least two factors that predicted imminent death.

Table 1 Distribution of the characteristics of care provided by nurses (per shift and over 24 hours)

	Present		Not registered	
	No.	%	No.	%
Hygiene care	36	43,4	4-5	54,2
Oral hygiene	2	2,4	81	97,6
Comfort care	52	62,7	31	37,3
Skin integrity assessment	73	88,0	10	12,0
Use of the Braden Scale	57	68,7	11	13,3
Application of dressings and skin protection	24	28,9	54	65,1
Regular placements per shift	54	65,1	29	34,9
Change of position to symptomatic relief	12	14,5	71	85,5
Cardiac monitoring and pulse oximetry	81	97,6	2	2,4
Monitoring of vital signs	80	96,4	2	2,4
Blood glucose monitoring	77	92,8	5	6,0
Pain evaluation (more than 2X/shift)	65	78,3	10	12,0
Use of a pain scale	58	69,9	13	15,7
Use of the same type of pain scale by the team	50	60,2	18	21,7
Assessment of the state of behaviour and consciousness	80	96,4	3	3,6
Respiratory profile evaluation	80	96,4	2	2,4
Supplemental oxygen (hypoxaemia)	69	83,1	6	7,2
Aspiration of secretions	20	23,8	61	73,5
Assessment of the ability of the patient to be fed orally	52	62,7	31	37,3
Placement of new venous accesses	79	95,2	2	2,4
Evaluation of urine output	75	90,4	8	9,6
Performing an electrocardiogram	41	49,4	38	45,8
Accompanying the patient to the imaging service	25	30,1	55	66,3
Other care	58	69,9	25	30,1

Table 2 Distribution of data relative to symptoms associated with imminent death

	Present		Not registered	
	No.	%	No.	%
Confusion; agitation; restlessness	13	15,7	18	21,7
Pain; moan/lamentation	29	34,9	22	26,5
Bradypnoea	38	45,8	10	12,0
Polypnoea	32	38,6	11	13,3
Noisy breathing; rattle	26	31,3	54	65,1
Bradycardia	44	53,0	4	4,8
Tachycardia	29	34,9	4	4,8
Hypotension	69	83,1	6	7,2
Hypertension	0	0,0	6	7,2
Nausea/Vomiting	3	3,6	75	90,4
Change in skin colour (pallor, livor mortis, ...)	48	57,8	34	41,0
Comatose state	37	44,6	46	55,4
Cardiorespiratory arrest	80	96,4	3	3,6
Recording a medical decision not to resuscitate	4	4,8	70	84,3
Other causes	80	96,4	2	2,4

Table 3 Distribution of data relating to the identification of at least two of the signs and symptoms of entry into the agony phase

	Yes	
	No.	%
Bedridden patient/aggravation of asthenia	71	85,5
Semi-comatose patient/decreased state of consciousness	78	94,0
Minimal fluid ingestion/dysphagia	33	39,8
Inability to administer oral drugs	39	47,0

Adapted criteria from Ellershaw & Ward (2003).

Discussion

The main results indicate that the majority of patients died in the OR in a period between the first two and twenty-four hours, which is similar to other studies (18–20). Admissions were for respiratory distress and prostration – mostly conscious, prostrate terminal or agonising patients manifesting pain/discomfort resulting from the decompensation of chronic diseases and/or lack of symptomatic control (3). The results show similarities with other studies regarding the prevalence of respiratory problems (dyspnoea, noisy breathing, agonising breathing), prostration and hyporeactivity, lethargy and easy tiredness, asthenia, anorexia, food refusal, nausea/vomiting, pain, fever, sweating, changes in the urinary tract (oliguria), diarrhoea, constipation and neurological changes (stupor and comatose state) (18, 21, 22). Nursing interventions favoured technical-instrumental care (23) related to medical prescriptions and service routines such as venous punctures, catheterisations, taking blood samples for analysis, aspiration of secretions, administration of intravenous fluids and drugs for symptomatic control, and monitoring of vital parameters and the state of consciousness. They are part of a set of nursing procedures used to respond to urgent and emerging situations of acute or chronic acute illness (24), but which are applied in patients at the terminal stage of chronic and irreversible disease, who need above all comfort care (5, 20, 25). In accordance with the study carried out by Veiga et al. (26), the results of the study presuppose a certain appreciation of the technical-instrumental and pharmacological interventions for symptomatic relief associated with nonpharmacological measures directed at the end-of-life patient, although reference is made to the provision of comfort care (hygiene care and skin protection, positioning, feeding) in accordance with the measures practised in this service. To optimise care, the use of technology must coexist with maintenance and comfort care, and it is argued that caring and treating concepts do not compete with one another; rather, they are complementary (27). Among the various invasive procedures, the use of the IV route in a hospital context is considered by

nurses as a fundamental procedure (28), and the results of the study confirm that this was the preferred route of administration for fluids and drugs even in patients whose death was expected (29). The SC route was used only for the administration of drugs (heparin and insulin) (6), contrary to what some studies show on patients dying in the ER, in home care settings, in PC units (30–32) and even in a hospital setting (21), which refer to the preferential use of the SC route for the administration of drugs due to the physically degraded condition of the patient in EOL care. For these authors, recourse to the IV route should be made in situations of anasarca, haemorrhage, rejection of other methods or the need to use drugs administered exclusively through this route. Despite the evidence of the benefits of the use of the SC route in EOL patients, there is some resistance to its use. Also with regard to invasive procedures, the taking of blood samples for routine analysis (6) and collection of samples for control of urine output are considered prevalent invasive practices performed by nursing staff (24), which confirms the results found in this study, contrary to reports by other authors (16, 29). Symptomatic urinary catheter, which has been reported in about 13.3% of patients, is in accordance with recommendations for the use of a urinary catheter in patients who experience agitation and pain due to urinary retention despite the imminence of death (21). In 2013, Krause (33) questioned these measures by arguing that in patients with advanced and progressive disease in the terminal stage, the adequacy of certain complementary tests that do not offer a performance that contributes to patient comfort should be questioned, and suspended whenever the team understands that the result will not produce a positive therapeutic effect. Regarding the administration of drugs used in curative treatments (antibiotics, insulin, heparin, diuretics, nitrates, antiarrhythmic, digitalis and vasoactive amines, among others), the results are very similar to those described by other authors (6, 34, 35) when they wanted to show that a significant percentage of patients with chronic disease who died in the ES were given life-support care. The low percentage value of 14.5% for the decision to stop medication considered nonessential, in comparison with the results obtained in another study (34), leads to the assumption that these patients receive maintenance and comfort care, analgesics for pain control, sedation and reduction of anxiety with neuroleptics and benzodiazepines (BZD) (36). These results are not comparable to the 2010 study by Le Conte et al. (34), in which the decision not to start/stop treatments was present in about 78.8% of patients over 80 years of age with metastatic neoplastic disease, or the cross-sectional study conducted in 2012 in French and Belgian ERs by Van Tricht et al. (36), in which it was found that this decision was made in about 80% of patients. The results of a study by Damghi et al. in 2011 (35) show that this is a

shared decision within the team that assists the patient (doctor and nurse) (35), and it is not uncommon to take the decision to suspend treatments and interventions considered inappropriate (12, 37). In 2003, Ellershaw and Ward (14) found that nonessential drugs should be discontinued in EOL patients, while drugs such as opiates, anxiolytics and antiemetics should be continued, and that the administration of fluids should be limited or discontinued. Venous hydration as a common procedure in ER was present in most of the nursing records, which explains the significant prevalence of venous punctures for fluid and drug administration, which may be comparable to studies performed by other authors (6, 29, 33) on agonising patients admitted to a medical service for whom treatment was not suspended after the entry into agony. Other authors of studies on the effects of hydration (thirst and fatigue) in patients with neoplasia in the terminal phase found that physicians, PC nurses and nurses in oncology units consider that intravenous hydration has limited benefits in the relief of symptoms of dehydration associated with symptoms of fluid retention, although with significant differences regarding this procedure (37, 38). The administration of opioids in an IV route or SOS perfusion was associated with pain control and near-death situations (6, 39). In a similar way to the 2010 work by Beccaro et al. (40), in this study morphine was the most prescribed and used opioid, and bolus morphine administration may have been for patients with severe dyspnoea (41). Because dyspnoea can trigger elevated levels of anxiety in patients (21, 30, 33), administration of BZD and/or midazolam is frequent, which may justify the use of these drugs for dyspnoea in this study as mentioned in the review article (41). Reference to drugs for the control of nausea and vomiting commonly used in ERs was found in another study (40). With the proximity of death, the records showed the evolution of symptoms that reflect a general pattern of deterioration due to complications (pain, dyspnoea, anxiety, bradycardia, hypotension, nausea, vomiting, rattle) due to the underlying pathology and/or medication, associated with a gradual deterioration and multi-organ failure with consequent death (9, 42, 43). Patients' entry into the comatose state was recorded by nurses (44), and records of pain occurrence were similar to the study (45) in which it is stated that pain is frequently present in end-of-life patients and is associated with discomfort caused by nausea, vomiting, difficulty breathing, immobility and incontinence. Pain is not necessarily more severe at the end of life (43). The records indicate that nurses have identified predictive factors of entry into the agonising phase—recognition of at least two signs/symptoms—as reported by some authors (43, 46, 47), but their explicit recognition presented low percentage values (48). If some deaths are unexpected, others may be predictable and professionals must be trained to predict them and

thus contribute to the provision of high-quality comfort care (16, 43, 49). There are many uncertainties as to the proximity of ('expected') death because the prognosis is not clear and death prediction is not easy for nurses who are prepared for healing (9, 10). Regarding the decision to suspend resuscitation, the results of the study point to a reduced number of patients for whom this decision was taken, as in several studies (50, 51). Other studies (37, 39, 52) allude to the difficulties of teams in overcoming the ethical issues that this decision, which is not unanimously accepted by professionals, implies (doubt, insecurity), although they consider that resuscitation is not appropriate for these patients. In the light of these symptoms, some of the nursing interventions were not appropriate for the needs of the EOL patient with advanced, irreversible disease, and some authors justify this with the lack of knowledge of the patient's history and stage of the disease upon admission (10, 36).

Limitations of the study

There are a number of limitations to this study. Firstly, all data were collected from nursing records, even if more interventions were carried out but not recorded.

Secondly, the size of the sample and the selection of processes do not support data generalisation. Nevertheless, even if the results cannot be considered as general, they do contribute greatly to the acquisition of knowledge and practical skills in the field of end-of-life patient care in emergency services, in addition to functioning as catalysts for future research, training and changes in practices.

Implications and conclusions

This study shows that nursing interventions are initiated in response to nursing diagnoses that focus on the 'function' or 'organ' domain. These interventions relate to life-support care, are based on medical prescriptions and accompany patients' end-of-life care, which may explain health professionals' difficulty in recognising the entry into agony phase, as well as the multidisciplinary team's decision-making towards avoiding therapeutic obstinacy. At the same time, the results show actions aimed at patients' comfort, which reflect an autonomous care while following a certain model of service routines. The gap in the documentation of interventions regarding the psycho-emotional, spiritual and social support provided to families is consistent with other studies. However, it does not mean that nurses do not intervene at these levels. The end-of-life therapeutic approach, centred on the biomedical model that characterises multiple emergency care models, is based on the palliative care paradigm to the extent that it focuses on the patient's functional status and symptomatic relief. However, the

nursing and multidisciplinary teams should discuss the patient's prognosis and plan the appropriate care using instruments similar to the LCP, taking into account each end-of-life patient's unique characteristics in order to optimise practices and ease the patient's dignified death.

This study suggests that health professionals should use protocols based on scales or instruments aimed at establishing a prognosis of near death and design an individualised care plan for each end-of-life patient, which may include the suspension of unnecessary treatments and resuscitation manoeuvres and its communication to the family. In addition, nurses should receive professional training in palliative care, taking into account the dynamics and specificities of the emergency department. Finally, it would be important to have an in-hospital palliative care support team responsible for regulating practices, as well as consulting and providing internal training.

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Author contributions

Maria Eduarda Diniz Pereira, Maria dos Anjos Dixe and Antonio Barbosa were responsible for the study design. Maria Eduarda Diniz Pereira performed data collection, analysis and drafting of the manuscript. Maria Dos Anjos Dixe and Antonio Barbosa critically revised the manuscript and supervised the study.

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