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Palliative care of elderly patients in intensive care units: a systematic review

Cuidados paliativos para idosos na unidade de terapia intensiva: revisão sistemática

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ABSTRACT

Objective: The use of interventionist medical technology in terminal elderly patients must be associated with palliative care as a measure of clinical support in intensive care units. Palliative care is an important component of end-of-life care, and the assistance provided by the healthcare team should be guided by decisions made by patients and their family members. Prolongation of life not accompanied by therapies aimed at relieving symptoms, such as pain and dyspnea, contributes to patient and family member stress suffering. The aim of the present study was to survey advances made in the application of palliative care in intensive care units.

Methods: Medline and Bireme were used to perform a systematic literature review of intensive care units-based palliative care for elderly patients.

Results: A total of 29 articles describing palliative care in intensive care units were analyzed according to the variables “satisfaction of relatives when they participate in the discussions on palliative care” and “difficulties to implement such type of care due to lack of technical skills of the health caregivers.”

Conclusion: Palliative care for elderly patients in intensive care units must be more thoroughly investigated to improve the relationships and communication among patients, their relatives, and the healthcare team. As greater numbers of elderly patients are admitted to intensive care units, the skills of health caregivers must improve to meet the challenges posed by the end-of-life care.

Keywords: Aged; Hospice care; Life support care; Palliative care; Critical care; Chronic disease

INTRODUCTION

Palliative care (PC) comprises interventions to treat patients during the end of life. According to the World Health Organization (WHO), PC includes interventions that relieve unpleasant symptoms caused by treatment or disease progression.^(1,2) Elderly people are the group most frequently subjected to such interventions, especially those undergoing long treatments for chronic diseases, such as dementia; neoplasia; and heart, lung, or kidney disease. The serious impacts of aging on health became more clear in Brazil starting at the end of the 1980s, and consequently, clinical approaches specifically targeting the elderly came to be considered as essential.⁽³⁾ Nevertheless, despite improvements in the diagnosis, treatment, and prognosis of diseases, the subject of “death” looms large in the minds of the elderly and their attendants. One of the major concerns of healthcare professionals who treat the elderly is the manner in which death is experienced by the patients and their relatives. A large fraction of deaths occur in hospitals, especially in intensive care units (ICU). This is one of the reasons

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why the relationship between PC and ICUs must be understood from the perspective of shifting disease patterns and increased longevity.⁽⁴⁻⁶⁾ The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment (SUPPORT) was a pioneering investigation that laid the groundwork for further research.⁽⁷⁾ In Brazil, this subject came to the forefront when the British journal *The Economist* published a 2010 ranking on the quality of death in several countries. According to the selected criteria, Brazil was the third worst country to die in.⁽⁸⁾

When discussing end-of-life conditions in the elderly, we must take into account the symptoms of chronic diseases and their required care as the fundamental elements to afford relief from suffering and to maintain patient functional ability. The aim of referrals to the ICU is to make the most modern life-support resources available. However, even when technology is able to afford patients and their relatives symptom relief, it is insufficient for ameliorating their suffering and anguish.^(9,10)

PC comprises a set of interventions independent from the motives of admission that afford comfort to patients and that might be performed simultaneously with ICU interventionist and “curative” actions. The healthcare professionals who assist patients with very severe diseases are aware that the most probable outcome is death.⁽¹¹⁾ When facing imminent death, instead of insisting on treatments for with recovery of the clinical picture reversion and prolonging life despite any resulting suffering, intensivists doctors and nurses should direct their attention toward treatments that promote relief and comfort. PC increases therapeutic options beyond traditional ICU care strategies. As an example, one might mention the combined use of a titrated dose of morphine and non-invasive ventilation with mask to treat dyspnea associated with chronic obstructive pulmonary disease (COPD) instead of orotracheal tubes. The use of non-pharmacological interventions such as physiotherapy, speech therapy, psychology, relaxing techniques, and music therapy might promote well-being while the patients are subjected to intensive treatment.⁽¹²⁾ Respect for the autonomy of patients and their relatives by stimulating their participation in the decision-making process is also an initiative that might contribute to minimize anguish in a way drug therapies usually cannot.

The use of PC in ICU is not new. There is ample literature to support its use, and thus, there is no reason for patients to suffer at the time of death. The aims of the present review were to systematically assess the

literature for advances made in PC in ICUs and to suggest that PC options be implemented as protocols in conjunction with clinical guidelines that are already available. An example of these protocols is the protocol that directs the measures for the prophylaxis of pneumonia associated with mechanical ventilation.

METHODS

We performed a systematic literature review of descriptive studies assessing PC for patients >65 years old in ICUs. Articles in English, Spanish, and Portuguese were analyzed, but published editorials and letters were excluded. The National Library of Medicine (NCBI) and Virtual Health Library (Biblioteca Virtual em Saúde - BVS) were used, and the following databases were searched: Cochrane Library, IBECs, Scientific Electronic Library Online (SciELO), and PubMed. All articles published between January 1960 and November 30 2011 were analyzed. The search keywords used were “*cuidados paliativos*” and “*unidade de terapia intensiva*” in Portuguese; “palliative care” and “critical care” in English; “*unidades de cuidados intensivos*” and “*cuidados paliativos*” in Spanish. The English keywords were Medical Subject Headings (MeSH) Terms from the US National Library of Medicine (NLM).

We considered the following variables during our analysis: type of study, i.e., whether it was based on qualitative or quantitative methods; aims; and results and conclusions. To analyze the methodological quality of the studies, the following guidelines were used: PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) and STROBE (STrengthening the Reporting of OBservational studies in HYPERLINK “<http://www.cochrane.org/glossary/5#term226>” Epidemiology).^(13,14)

Studies identified in the initial search were selected based on their titles and abstracts, which were independently and blindly assessed by two researchers. Selection was performed in two stages: first, the title and abstract of all located studies were assessed, and those that met the requirements were assessed in full. Inter-examiner disagreement as to the selection of articles was solved by consensus; when consensus could not be achieved, the articles were included for full-text assessment.

Studies that focused on specific pharmacological interventions or did not discuss the relationship between both terms (palliative care and critical care) were excluded. Studies that did not provide abstracts were also excluded.

RESULTS

The present systematic review located 333 studies. After selection by title and available abstract, 57 studies remained, and 28 of these were excluded because they were editorials or letters or did not address the relationship between the two subjects of interest. A total of 29 articles were selected for full-text assessment. Figure 1 depicts the flowchart of the article selection process. Notably, the number of publications addressing both subjects of interest increased in the last 10 years (Table 1).

The selected articles are described in charts 1-3.

Table 1 - Proportional distribution of articles including the terms “palliative care” and “intensive care unit” between 1960 and 2011

Years	PC	ICU	Crossed terms
60-70	144(1.6)	0(0.0)	0(0.0)
70-80	502(5.4)	67(1.3)	0(0.0)
80-90	1,137(12.3)	676(12.7)	13(3.9)
90-2000	2,259(24.5)	1,497(28.0)	47(14.1)
2000-2011	5,179(56.2)	3,097(58.0)	273(82.0)
Total	9,221(100)	5,337(100)	333(100)

PC - palliative care; ICU - intensive care unit. Results expressed in number (% of total).

We chose to classify them in three groups: studies that used qualitative methods; studies that used quantitative methods; and studies comprising reviews, descriptions of experiences, or the theoretical foundations of PC.⁽¹⁵⁻⁴³⁾ The results of the main selected articles are provided below.

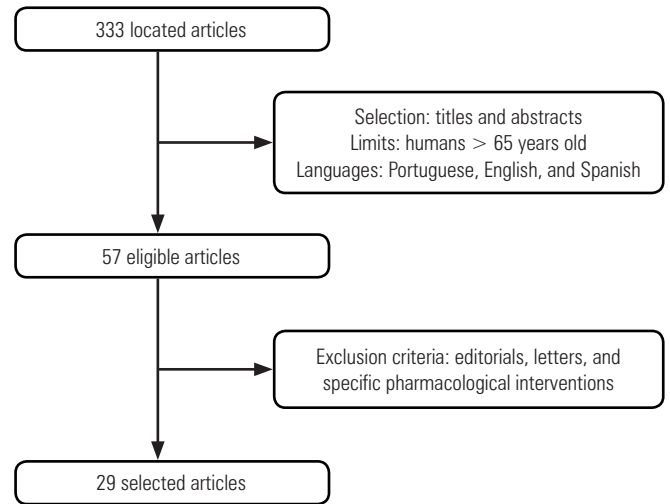


Figure 1 - Search method flowchart.

Chart 1 - Characteristics of the selected qualitative studies on PC in ICUs between 1960 and 2011

Author, year	Type of study/Method	Aims	Results and Conclusions
Singer et al., 1999 ⁽¹⁵⁾	Analysis of answers in interviews with specialized intensive medicine coordinators.	To identify and describe important quality factors in end-of-life care from the patients' perspective.	Five domains of quality in end-of-life care were identified: control of pain, avoidance of prolongation of life, maintaining control, relief of suffering, and improved relationships. These domains might help improve the quality of life for terminal patients
Gherardi et al., 2000 ⁽²⁰⁾	Content analysis of questionnaire answers provided by 93 intensivists doctors.	To discuss the decision of whether to start or discontinue life-support measures in the ICU.	Lack of legal regulations or jurisprudence protecting doctors and lack of cultural consensus on PC were the main hindrances to restricting ICU interventions. The medical field lacks consensus on the technical decision or desire to act.
Palú et al., 2004 ⁽²²⁾	Discourse analysis of nine reports by ICU nurses.	To understand ICU nurses' perception of death.	Nurses reported feeling emotional and having some doubts while performing their tasks. They did not feel prepared to address death and tended to deny it and associate it with failure.
Lourenço, 2004 ⁽²³⁾	Content analysis of 20 ICU visitor interviews.	To investigate the environment as an impact factor from visitors' perspective. To offer a caring and comfortable environment for visitors.	Comfort through their faith, discomfort due the anticipated loss of a beloved one, and need of affection and attention by ICU caregivers were the main findings of the investigation of the targeted setting. The authors suggest the creation of ICU care environments to improve the reception of visitors on the grounds of 9 assumptions.
Earle et al., 2005 ⁽²⁴⁾	Analysis of protocol patterns and existing statistical variations in terminal patient care using Medicaid and Medicare data on 48,906 deaths over 5 years in 11 areas of the United States.	To assess whether resources such as chemotherapy, hospital admission, and hospices might serve as markers of the type of care given to terminal patients.	Aggressive treatment was not administered in most cases, and 55% of cases were referred to hospices. The usefulness of such measures depends on the treatment that is instituted and might eventually be used as markers of the work by the team.

PC - palliative care; ICU - intensive care unit.

Chart 2 - Characteristics of the selected quantitative studies on PC and ICUs between 1960 and 2011

Author, year	Type of study/Method	Aims	Results and Conclusions
Predergast et al., 1998 ⁽²⁶⁾	Prevalence study. Analysis of how intensivist doctors categorize death in the ICU where they work.	To establish the frequency of cardiac resuscitation maneuvers and interventions to maintain life in the ICU.	In all, 70% of patients placed limits on end-of-life care; the actual frequency of use of maneuvers or decisions to discontinue interventions at the end of life was not known; lack of consensus on limiting interventions suggested the need for ICU managers to attempt to understand different motives to make medical decisions to improve the quality of assistance.
Lilly et al., 2000 ⁽³²⁾	Intervention study. The intervention studied was the use of communication to discuss the assistance plan with relatives within 72 hours from the admission of 530 patients to the ICU.	To determine the effect of communication on decisions regarding advanced life support. To determine whether care provided by a PC team was effective in meeting the patients' goals; to determine whether communication with relatives facilitated the transition from advanced life support to PC. To determine whether communication within the healthcare team reduced the length of hospitalization and the mortality rate.	Communication influenced the reduction of the median time of ICU hospitalization from 4 to 3 days and the maintenance of the mortality rates; more limits were imposed on interventions when the relatives participated in the discussions; higher level of satisfaction was achieved for patients assisted by the multidisciplinary team; an increased frequency of consensus between the healthcare team members and the relatives was found (reduction of the disagreement time rate from 65 days to 4 days/1,000 patients-day and from 171 to 16 days/1,000 patients-day, respectively).
Mann et al., 2004 ⁽⁴³⁾	Descriptive study. Description of 17 cases of patients admitted to ICU at the end of life.	Description of the authors' experience in transferring terminal patients from the ICU to their homes.	All 17 relatives were consulted, and treatments that demanded the permanence of patients in the hospital were discontinued; in the end, the response was positive with regard to the decision to transfer terminal patients to their homes.
Loyd et al., 2004 ⁽³¹⁾	Prospective cohort. Analysis of the answers of 50 patients admitted to the ICU when scenarios of imminent risk of death were presented.	To establish the influence of self-response on quality of life before hospital admission and in regard to the prediction of mortality prognosis. To establish whether such self-responses influenced the length of stay in the ICU and the ICU care of severely ill elderly patients.	Approximately 80% accepted admission to ICU with mechanical ventilation when the odds of survival were 50% in 15 days; 50% would stay 1 month if the odds were higher; and 30% would accept if the odds were 1%. Prediction of quality of life after discharge from the ICU seems to be important in decision making by the medical team but did not alter the length of stay of severely ill patients.
Watch et al., 2005 ⁽³⁴⁾	Three-year retrospective cohort. Review of clinical records of patients >55 years old who died after ICU admission.	To establish what factors were related with the discontinuance of treatment to maintain life in trauma victims who died.	From the total number of admissions, 20% died, and intervention was discontinued in 54.7% of cases. Discussions with relatives were documented in 78% of cases. Factors such as age, prognostic indexes of severity, comorbidities, and complications were not associated with intervention discontinuance.
Long and Lescoe-Long, 2005 ⁽³⁵⁾	Two-year prospective cohort. Follow-up of elderly patients included in a care management program with functional disability or repeated hospitalizations	To establish whether there is an inverse correlation between age and aggressiveness of the indicated treatment in elderly patients with functional disability. To establish whether patients who died received more aggressive treatment than those who survived.	The intensity of assistance decreased by 8% in outpatients 75-79 years old and by 32% in those older than 90 years old; this difference was not observed for hospitalized patients, whereas the oldest elderly patients who died received more aggressive treatment than those who survived. The authors point to the need of more discussion regarding advanced will guidelines and compliance with the will expressed by patients as important factors in the decision-making process.
Twaddle et al., 2007 ⁽³⁶⁾	Multicenter prevalence study in 35 university hospitals. Review of 1,596 clinical records of patients admitted to the ICU for more than 4 days in the course of 1 year.	To assess the occurrence and quality of palliative care performed at the investigated locations.	Among 1,596 cases, 90% were rated as severe diseases; 16.7% died, and 52.6% of these deaths were due to respiratory causes (20% very severe). In the group of patients who died, 57% were in the ICU for 48 hours, 34% signed advanced life support guidelines, and 80% requested PC. Of the patients who survived, 42% were discharged, and 66% received PC. The main palliative measures included treatment of pain and dyspnea, psychological assistance, and a plan for discharge. Assistance varied among the investigated hospitals; the services were more effective in the care of physical symptoms. The coordination of assistance must be improved. A package of palliative measures is suggested as an approach to improve care given to patients at the end of life.

Continued...

Chart 2 - Continuation

Author, year	Type of study/Method	Aims	Results and Conclusions
Barnato et al., 2007 ⁽³⁷⁾	Prevalence study. Analysis of interviews performed with elderly patients affiliated with Medicare during 8 months in 2005.	To assess regional differences in patients' preferences with regard to end-of-life treatment.	A total of 2,515 interviews were performed, and 80% of interviewees stated that they preferred to die at home.
Sharma et al., 2008 ⁽³⁸⁾	Retrospective cohort. Review of clinical records and data from Medicare, Medicaid, and the National Cancer Institute.	To investigate the tendency to use ICU resources in the last 6 months of life of patients with advanced lung cancer over a 9-year period. To investigate the cost of assisting these ICU patients.	The use of ICU increased by 7.2%; 25% of such patients received mechanical ventilation with an average hospitalization length of 5.9 days; the average cost of ICU patients was approximately 40% higher compared to patients out of the ICU. Despite the growth of hospices, admission of elderly patients with advanced stages of neoplasia to the ICU is still increasing.
Mosenthal et al., 2008 ⁽²⁷⁾	Prospective cohort. Study to assess the integration of a PC team in the ICU. It included early communication between the PC team and relatives as an intervention.	To show that early communication regarding treatment among relatives and ICU professionals is a support measure that might improve end-of-life care.	Early palliative intervention did not alter patient mortality, but the participation of relatives in the debates increased by 32%, which resulted in earlier consensus as to the goals suggested by the ICU team. The mortality rate did not change, which was different from the increased number of decisions not to resuscitate. The purpose of this study was to contribute to the local culture of care.
Curtis et al., 2008 ⁽³⁰⁾	Intervention study. Implementation of a complex support system by means of educational actions for healthcare teams and ICU patients' relatives.	To assess the quality and effectiveness of intervention to widen the scope of ICU PC by changing the attitude of the healthcare team towards proactive behavior in regard to patients and valorization of relative participation.	Out of a total of 590 deaths, the relatives of 496 received the intended intervention; 55% of the relatives and 89% of the nurses responded positively; the quality of assistance by the nursing team improved, and hospitalization length decreased.
Tang et al., 2009 ⁽³⁹⁾	Four-year retrospective cohort in Taiwan. Review of clinical records of 242,530 terminal patients who died during the study period.	To assess the tendency of the quality of care given to oncology patients at the end of life.	All the investigated patients received more intensive care in the last month of life; more patients tended to be referred to ICU where the average length of hospitalization was longer than 14 days. Of the investigated population, 63% died in the hospital. The quality at the end of life was poorer than expected, and guidelines were recommended to improve such support.
Setoguchi et al., 2010 ⁽⁴¹⁾	Seven-year retrospective cohort. Review of clinical records and data from: Medicare, cancer records, hospice, emergency services, and a specific drug supply program.	To describe the use of opiates by patients with terminal HF in emergency services and hospices. To compare this population with a cancer patient population.	A total of 45,559 patients with HF were studied, and 15,231 of these also had neoplasia. Among those referred to hospices, 51% had neoplasia, and 20% had HF. The group with neoplasia used 23% more opiates than HF patients in the hospices. More patients with HF die in emergency services compared to patients with neoplasia. Patients with HF died in emergency services and had less hospice support and opiates. Opportunities to provide clinical and pharmacological support and afford better care at the time of death are better for HF patients.
Bloomer et al., 2010 ⁽²⁸⁾	Prevalence study. Review of the clinical records of admissions to ICU in 1 year.	To review the end-of-life process in the ICU and the involvement of relatives.	Out of 70 clinical records, death occurred in 86%, and 85% of these did not employ resuscitation maneuvers; in 90%, relatives participated in the discussions; in 49%, intensive treatment was discontinued; and in 46%, at least one relative was present at that moment. The authors concluded that death was predictable in the ICU, and end-of-life care was performed on the basis of a consulting process.
O'Mahony et al., 2010 ⁽⁴²⁾	Intervention study. Application of an assistance model of end-of-life patients in ICU.	To promote an integrated end-of-life care model. To integrate PC in the ICU by means of consultants. To stimulate the transfer of terminal patients from ICU to other hospital areas and hospices.	The rate of formalization of advanced guidelines increased; the time for the ICU to request a PC team decreased by 12 days; 33% of patients assisted by the PC team requested not to be resuscitated (this request was met 83% of the time); 51% of patients were referred to hospices, whereas 33% were hospitalized; the survival time of patients did not change; the use of opiates increased in the group that received intervention. The PC team might improve the implementation of care and was associated with better assistance quality by the patients, their relatives, and the medical team.

PC - palliative care; ICU - intensive care unit; HF - heart failure.

Chart 3 - Characteristics of the selected theoretical and review studies on PC and ICUs between 1960 and 2011

Author, year	Type of study/Method	Aims	Results and Conclusions
Mularski and Osborne, 2003 ⁽¹⁸⁾	Theoretical foundations	To describe the principles of PC and elucidate the justification for end-of-life care to the geriatric population in ICU.	The authors advocate the need to consider the admission of elderly patients to the ICU from financial and emotional perspectives.
Curtis et al., 2007 ⁽²⁵⁾	Literature review with later discussion by an expert panel	To establish guidelines for the use of non-invasive ventilation instead of orotracheal intubation at the end of life.	The panel suggested the use of non-invasive ventilation when patients and their relatives are able to make such a choice after a meeting with the ICU team to discuss risks and benefits.
Dawson, 2008 ⁽¹⁶⁾	Theoretical foundations based on a case report	To discuss the definition of PC and the complexities of care to the severely ill elderly and to suggest recommendations for nursing practices.	Recommendations for the practice of end-of-life care by nurses, who are the caregivers closest to patients.
Costa-Filho et al., 2008 ⁽¹⁷⁾	Theoretical foundations	To present the philosophy of PC as complementary to curative treatments, to promote it as an opportunity for professionals to dignify the assistance they provide, and to indicate barriers hindering its implementation in ICUs.	Education of healthcare professionals in the palliative field has paramount importance to promote PC in ICUs; the importance of PC should be stressed and additional research on the subject should be conducted.
Moritz et al., 2008 ⁽¹⁹⁾	Theoretical foundations	To assess and summarize the current state of knowledge on end-of-life care and PC in the ICU.	The following subjects were approached: ICU communication, decision making in regard to end of life and PC, and palliative treatment in the ICU.
Mosenthal et al., 2008 ⁽²¹⁾	Theoretical foundations	To describe the basic principles and tools of PC in the surgical ICU.	How to redefine the aims of care, combine comfort and interventions, when to discontinue or decline treatment, and the importance of emotional and spiritual support.
Ryder-Lewis, 2005 ⁽³³⁾	Description of professionals' experience in discharging terminal patients from the ICU	To describe experiences discharging ICU patients under PC to die at home.	Careful planning and relative participation must be performed for the removal of tubes and drugs that support patients. PC must involve community-based studies, skilled human resources, and a safety policy for patients and their relatives.
Kuschner et al., 2009 ⁽²⁹⁾	Description of ICU PC practice based on 4 cases assisted by doctors and assessed by nurses	To describe ICU PC to reduce communication conflicts between doctors and nurses.	According to the nurses, interventions were not excessive in the presented cases; the authors concluded that improvement of service quality, standardization of measures, and the development of guidelines to orient the healthcare professionals would diminish individual differences in clinical interventions, especially in palliative interventions, thus favoring the elimination of variation among professionals; ICUs need to improve the communication and professional training with regard to PC.
Delisser, 2009 ⁽⁴⁰⁾	Description of the medical approach to end-of-life care by relatives with distorted expectations on the reversibility of terminal patient clinical conditions	Used a representative case to suggest alternative paths of communication for families with unrealistically high expectations on the improvement of their severely ill relatives in the ICU.	This specific type of approach might be effective in helping families cope with the loss of loved ones.

PC - palliative care; ICU - intensive care unit.

Singer et al.⁽¹⁵⁾ performed a qualitative study that administered a questionnaire to the coordinators of specialization courses in intensive medicine. The aim of this study was to identify and describe the elements corresponding to domains of quality in end-of-life care from the patient perspective. Five domains were identified: a) control of pain and appropriate symptom management, b) avoidance of inappropriate prolongation of life that causes unnecessary suffering due to the application of curative measures, c) maintenance of patient autonomy, d) stress relief, and e) strengthening of relationships with the patients' relatives. These dimensions are also a component of PC interventions. The study by Dawson⁽¹⁶⁾ on the theoretical foundations of PC discusses the notion of PC and the complexity of terminal patients within the context of a case report. It

points to the importance of understanding the mutual relationships among PC caregivers, the elderly, and ICU caregivers, because PC is centered on the patients and their relatives. Thus, the interventions facilitated by PC might improve the quality of life of the patients. That study further stressed that PC is directed toward physical, intellectual, emotional, social, and spiritual needs and that it favors patient autonomy, as well as access to information needed for making decisions regarding care. The author asserts that the ICU, as a place designed for preserving life, focuses reversing the clinical condition using instruments that might cause more damage than the intended benefit. For this reason, interventions that might provide essential comfort to the elderly, who are usually the most fragile patients, are sometimes inadvertently neglected. The

study concludes with a series of recommendations for applying PC in the ICU and stresses that the initiative ought to be taken by nurses, who are the closest health caregivers to patients.

A theoretical study by Costa-Filho et al.⁽¹⁷⁾ discusses PC as a philosophy of care that complements the curative treatments of modern medicine. The authors highlight the barriers that hinder the implementation of PC in ICUs, while stressing that PC affords an opportunity to act with dignity and purpose, especially for intensivists. They conclude that educating health caregivers in the field of palliation is of paramount importance for the promotion of PC in ICUs and state that research is needed to increase the dialogue of this subject in intensive medicine.

Mularski and Osborne⁽¹⁸⁾ discuss the grounds of PC for severely ill elderly patients and its relationship with the ICU. They comment on the need to assess the conditions that lead to the decision to admit these elderly patients to the ICU from several perspectives, including the considering the feelings of the patients and their relatives.

Prendergast et al.⁽²⁶⁾ conducted a survey on end-of-life ICU care. The authors conducted interviews and quantified the frequency of cardiac resuscitation maneuvers and discontinuance of life-support interventions. Protocol definitions were lacking in 30% of ICUs that participated in the study, and the authors were unable to quantify the frequency of use of resuscitation maneuvers. Moreover, there was not always a record of decisions to discontinue interventions at the end of life. Those authors observed that there was a lack of regarding palliative actions and PC training programs. They concluded by suggesting the need for ICU managers to make an effort to understand the reasons for variations in medical decisions and to propose protocols that might contribute to improve the quality of assistance.

Mosenthal et al.⁽²⁷⁾ performed a prospective study in a trauma ICU to assess the inclusion of a PC team in supporting end-of-life care and to establish whether structured and early communication with the patients and their relatives as a systematized intervention might be helpful. They found that implementing these changes improved relative participation by 32%, which resulted in a higher number of consensual decisions between doctors and relatives regarding the intended goals. Those authors concluded that this type of intervention resulted in early consensus and that the study contributed to changing the culture of care in that ICU.

Bloomer et al.⁽²⁸⁾ performed a retrospective cohort study in an Australian ICU to investigate the end-of-life process and the involvement of the patients' relatives. That study included 70 patients with an average age of 69 years old and expected mortality of 86% (as a function of severity indicators), and relatives were present in 66% of cases. Resuscitation maneuvers were not performed in 85% of the deaths. The family participated in the discussions regarding end-of-life decisions in 90% of cases, and in 49% of cases, the decision to discontinue curative treatment was respected. Those authors emphasize that although the study was conducted in a single ICU, it showed that PC in ICUs might be approached from several perspectives. This includes the participation of relatives, nurses, and doctors in the decision-making process, which makes the approach to care more patient specific. The authors conclude that death was predictable in that ICU and that the modality of end-of-life care was decided jointly by the patients' relatives and their health caregivers.

Kuschner et al.⁽²⁹⁾ described the practice of PC in ICUs aimed at reducing communication problems between doctors and nurses. The authors verified that the ICU doctors felt uncomfortable when the goal of care was palliative. The nurses reported that despite feelings of discomfort, the interventions suggested were not excessive, and the authors concluded that assistance standardization is a path that must be taken into account to improve the quality of ICU PC.

In an interventional study, Curtis et al.⁽³⁰⁾ assessed the quality of assistance in a model of integrated PC in the ICU as an approach to improve patient care. The authors applied a series of educational actions related to PC grounded on the premise of the "self-efficacy" theory. Their hypothesis was that changes in the attitude of the healthcare team, including proactive behavior, with regard to patients and valorization of relative participation might result in routine PC provision with consequent improvement of the quality of end-of-life care. The main results of the study were reduced length of hospitalization before death, improved PC application by the nurses, and greater relative satisfaction.

Finally, Lloyd et al.⁽³¹⁾ performed a prospective cohort study with 50 elderly patients over 80 years old with acute aggravation of chronic disease and approximately a 50% chance of dying. Their aim was to investigate the influence of the following variables on the decision to perform "invasive" interventions: 1)

patients' reports on their quality of life before admission, 2) possible quality of life after ICU admission and mortality prognosis, and 3) length of hospitalization and most likely needed invasive interventions. Those authors conducted interviews with the patients and presented two scenarios of risk: one consisted of a 14-day hospitalization with mechanical ventilation, and the other was a hospitalization longer than one month with mechanical ventilation, tracheostomy, and enteral nutrition. The results showed that patients who initially expressed preference for interventionist measures chose not to accept "invasive" interventions after the odds of mortality and possible quality of life were explained. The authors concluded that their study made clear the need to make the wishes of the patients known to the ICU staff. Respect for patient autonomy has become an important part of the discussion since the SUPPORT study.⁽⁷⁾

DISCUSSION

PC in the ICU is a relevant topic for several reasons, including increased prevalence of chronic diseases, the difficulty of healthcare teams in providing end-of-life treatments, and rapidly aging populations, which is particularly important in a country with a demographic profile like Brazil's, where 25% of the population will be considered elderly in the next 30 years.^(7,44,45)

There is theoretical justification to advocate for and apply PC in the ICU. Indeed, there are journals specifically devoted to PC that also contribute to the update of multidisciplinary interventions in pharmacological therapy and the organization of physical spaces favorable for such actions. The fact that the number of publications addressing both subjects together is small compared to studies addressing each one separately underscores the need to widen the debate and perform research on and include PC in intensivists' work routines. It is possible that PC will become a medical specialty in Brazil in the near future, as has already happened in the United Kingdom, Australia, and Canada. The first step in that direction was taken in Brazil at the beginning of 2010, when PC was acknowledged as a specialty field in geriatrics, anesthesiology, community medicine, pediatrics, and clinical medicine; it has also been added to the code of medical ethics.^(46,47)

Nevertheless, despite the available evidence on the importance of PC in the ICU and advances made regarding discussions on ethics, autonomy, and death,

the elderly still die with much suffering and pain.

Two issues stood out in the present literature review: first, there are only a small number of quantitative studies correlating PC, satisfaction of relatives, team communication, patient quality of life, and length of ICU hospitalization. Second, PC should be applied in the ICU because it improves quality indicators and helps in the construction and consolidation of positive relationships among ICU health caregivers, patients, and their relatives. PC might be adopted if intensivists receive technical training to apply palliative measures. Because the number of deaths in ICUs is high, discussions on how to perform PC must be conducted and incorporated into caregiver work routines. The present review indicated several paths for achieving these goals, including protocol development, health caregiver training, and the addition of this subject in medical residency programs.

The addition of the subject "PC in the elderly with chronic diseases at end-of-life in the ICU" will stimulate thoughts on how to focus ICU interventions in this subset of patients. PC represents an opportunity to intervene from another perspective that affords comfort, relief, and respect to patients and their relatives.

The number of publications on PC has increased in the last 10 years, and noticeably, only 2 of the 29 articles selected were published before 2000. The impact of aging on overall population demographics and the increasing prevalence of chronic degenerative diseases contribute to this trend. However, other motives might be considered, including that although the United Kingdom was the origin of the modern hospice movement, palliative medicine was only acknowledged there as a medical specialty in 1987. Issues such as the high number of patients who suffer and die in the ICU, the conflict between advances in artificial life-support techniques and ethical issues, and the participation of relatives in decision making emphasized the importance of debating the use of PC in intensive medicine (as a subject of research) beginning in the late 1990s and early 2000s.

Another frequent subject addressed by the selected studies was the important role of nursing in PC. Nurses participated in 12 out of the 29 selected studies, which stressed the fact that nurses play an essential role in palliative interventions. Nurses are in charge of directly assisting the patients and promoting the active participation of the full ICU team in such assistance. Multi-professional PC teams include other types of

professionals who are each important in their respective field. However, nurses stand out because they often lead PC planning.

CONCLUSION

Several barriers must be overcome for PC to gain wider implementation, including the beliefs and lack of technical training of ICU teams; the resistance of the patients' regular doctors, who sometimes oppose the suggestions made by intensivists; the managers of hospitals where the ICU is located; and finally, the patients' relatives when they have not been properly informed.

The present study was limited in regard to the search sources. The authors were aware that some relevant studies would not be located because the search was restricted to just two databases. However, the two portals are the best-known sources and are important in the terms of the journals they include and the frequency of access by healthcare professionals.

RESUMO

Objetivo: O uso de tecnologia médica intervencionista em pacientes idosos em estado terminal necessita ser associa-

do aos cuidados paliativos como medidas de suporte clínico na terapia intensiva. Esse recurso auxilia nas decisões ao final da vida do paciente e direciona a atenção da equipe de saúde para garantir o conforto do paciente e a satisfação da família. O prolongamento da vida sem a implementação de ações que visem amenizar sintomas, como dor e dispnéia, contribui para o estresse familiar e a morte com sofrimento. O objetivo deste trabalho foi conhecer os avanços no uso dos cuidados paliativos na unidade de terapia intensiva.

Métodos: Revisão sistemática sobre a relação entre cuidados paliativos aos idosos e a terapia intensiva nos portais Medline e Bireme.

Resultados: Foram analisados 29 artigos, que mostram experiências de cuidados paliativos em unidades de terapia intensiva utilizando as variáveis "satisfação da família quando participa das discussões sobre os cuidados paliativos" e "dificuldades na implementação desse tipo de cuidado por falta de capacitação técnica dos profissionais".

Conclusão: O tema "cuidados paliativos" deve ser aprofundado visando melhorar a relação entre pacientes, seus familiares e a equipe de saúde. Considerando o aumento do número de idosos na terapia intensiva, é fundamental melhorar a capacitação do profissional de saúde para enfrentar os desafios que envolvem a terminalidade da vida.

Descritores: Idoso; Cuidados paliativos; Cuidados para prolongar a vida; Assistência paliativa; Cuidados críticos; Doença crônica

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