ISSN: 2318-8413 DOI: 10.18554/refacs.v8i2.2564

REFACS

The benefits of palliative extubation on the quality of death

Os benefícios da extubação paliativa na qualidade de morte

Los beneficios de la extubación paliativa en la calidad de muerte

Received: 01/10/2018
Approved 09/01/2019
Published: 15/05/2020

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This study aims to present a review of the palliative extubation process and its benefits in the quality of death. It considered the period from 2012 to mid-2017 and used scientific documents from the databanks, SciELO, PubMed, Embase, and Cochrane. The search was carried out using the descriptors Extubation, Palliative Care, and Communication, in English and Portuguese. 19 articles were selected, from which 33.33% discussed palliative care associated with the quality of death, 38.88% discussed palliative care in the intensive care unit, 27.77% performed palliative extubation for a better quality of death. In the selected articles, the importance of a well-prepared multidisciplinary team was observed, as were communication with the family and the patient, and the outcome of a palliative extubation in the quality of death.
Descriptors: Communication; Palliative care; Airway extubation.

O estudo tem como objetivo apresentar revisão acerca do processo da extubação paliativa assim como seus benefícios na qualidade de morte. Considerou-se o período de 2012 a meados de 2017 e utilizou-se documentos científicos obtidos nas plataformas de dados, SciELO, PubMed, Embase, Cochrane. A busca foi realizada utilizando os descritores Extubação, Cuidados Paliativos e Comunicação em inglês e português. Para o estudo, selecionou-se 19 artigos, dos quais 33,33% apresentaram o cuidado paliativo associado à qualidade de morte, 38,88% apresentaram os cuidados paliativos inseridos na unidade de terapia intensiva, 27,77% realizaram a extubação paliativa para uma melhor qualidade de morte. Nos artigos selecionados observou-se a importância da equipe multidisciplinar bem preparada, assim como uma boa comunicação com a família e o paciente, bem como o desfecho de uma extubação paliativa na qualidade de morte.
Descritores: Comunicação; Cuidados paliativos; Extubação.

El estudio tiene como objetivo presentar revisión acerca del proceso de la extubación paliativa así como sus beneficios en la calidad de muerte. Se consideró el periodo de 2012 hasta mediados de 2017 y se utilizaron documentos científicos obtenidos en las plataformas de datos SciELO, PubMed, Embase, Cochrane. La búsqueda fue realizada utilizando los descriptores Extubación, Cuidados Paliativos y Comunicación en inglés y portugués. Para el estudio, se seleccionaron 19 artículos, de los cuales 33,33% presentaron el cuidado paliativo asociado a la calidad de muerte, 38,88% presentaron los cuidados paliativos insertos en la unidad de terapia intensiva, 27,77% realizaron la extubación paliativa para una mejor calidad de muerte. En los artículos seleccionados se observó la importancia del equipo interdisciplinario bien preparado, así como una buena comunicación con la familia y el paciente, así como el desenlace de una extubación paliativa en la calidad de muerte.
Descriptores: Comunicación; Cuidados paliativos; Extubación traqueal.

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INTRODUCTION

Events that lead to the admission in an intensive care unit (ICU) can lead to a worsening of the signs and symptoms of a chronic disease, due to complications. The ICU multidisciplinary team must be careful to continuously act in the clinical evolution of these patients. The care in ICUs can include palliative care when curative treatments no longer offers benefits.

In some situations, death is inevitable, and this situation can prolong psychological, social and financial suffering not only for the team involved, but also for patients and their families. In many cases, additional treatment can not be proposed for the patient, a situation more and more common in ICUs [1,2].

Discussions about palliative care in the ICU are still recent in Brazil. Hospitals are still unprepared for situations in which a patient needs palliative care; however, issues like this are present daily in the routine of these institutions. According to the World Health Organization (WHO), 57.89% of people who die need palliative care, and it is estimated that, in 2030, 15 million new cancer cases a year will need palliative care. Brazil deals with one million deaths per year and about 70% of these deaths occur in hospitals, specially in intensive care units[3]. Only 14% of patients in need of palliative care worldwide receive this type of assistance[4].

Palliative care is extremely important, regardless of whether the medical condition is acute or chronic, and whether it is in an early or late stage, as it treats patients and their families with humanity[5].

When organic changes in terminal illness challenge treatment, and when the scope of care can no longer be met or when life support is likely to lead to unsatisfactory results for patients, the ICU multidisciplinary team must ensure that patients have a quality death. The definition of quality death includes intrinsic and external qualities, the latter being physical comfort, autonomy, significance, preparation, and interpersonal connection. Respect should be promoted, from attention to the meanings of quality of death to avoiding damage and conflicts. These actions must be carried out by health professionals since they are responsible for caring for patients at the end of life[6,7].

Currently, the presence of palliative care services is considered necessary by the Commission on Cancer of the American College of Surgeons. Palliative care in the ICU provides support to patients and family members. It aims to offer a comfortable environment to the patient, and to raise awareness about the end of life. One of these actions of support is the palliative extubation[8].

Palliative extubations are the removal of the tracheal tube and mechanical ventilation (MV) when there are no curative therapeutic options left and, as a result, this type of therapy is no longer considered the best for the patient. Patients in this situation are those whose death is expected to occur in a short time. Before the removal of the MV, health professionals must consider the patient's clinical condition and whether they will benefit from extubation. Benefits of extubation can include offering the patient greater comfort, assistance from the multidisciplinary team, and a better communication between patient and family at this stage[9].

The communication process in palliative extubation involves perception, understanding and transmission of messages in the interaction between patients, family members, and professionals of the multidisciplinary team. For a quality service to be offered, communication and decision making must be shared with family members by the multidisciplinary team, an essential action for family satisfaction. Among the information addressed, professionals should report what to expect during the extubation process and how the symptom control process will be, allowing the family to be present at the time of death[10].

In palliative extubation, multidisciplinary work is essential. Doctors, nurses, and physical therapists are the most closely involved in this process. The role of the physical therapist stands out, as they have a direct role in some stages of the removal of MV, especially when there is a reduction in the parameters of the ventilator, changes in the ventilatory mode,

and extubation of the patient. Even though palliative extubation is associated with improved satisfaction and decreased family depression, there are still difficulties to implement this procedure in the ICU[10,11].

Discussions about what is best for the patient and family, and whether to continue with conventional advanced therapies, compromising comfort and imposing suffering, are important. Daily routine conducts should be made in a way that rethinks the patients' comfort and wellbeing, leading to a higher quality of death. Therefore, to bring forth the theme of palliative extubation is to consider that palliative care is not in its ideal conditions, since it means to assume that there is no early diagnostic which can trigger the start of this type of care, the end-of-life procedures, or the sharing of the decision with the patient and family members, so it can be easier for them to accept the inevitability of death.

In many cases, the artificial maintenance of life in the ICU, through mechanical ventilation, is maintained in patients who no longer have any possibility of a cure. This situation becomes a prolonged and difficult extension of the death process, where inconsistent, unnecessary, and painful treatments are provided for the patients to survive[12,13]. Thus, this study aims to present a review of the palliative extubation process and its benefits in the quality of death.

METHOD

This is an integrative literature review, where scientific documents were obtained from the PubMed (US National Library of Medicine National Institutes of Health), Embase (Excerptar Medical Database), Cochrane (The Cochrane Data base of Systematic Reviews), and Scientific Electronic Library Online (SciELO) databases.

The database search was performed using the terminologies registered in the Health Science Descriptors created by the Virtual Health Library, and developed considering the Medical Subject Headings from the U.S. National Library of Medicine. This allows the use of a common terminology in Portuguese, English and Spanish.

The descriptors used for the search were D060666 *Extubação* (Airway Extubation) D010166 *Cuidados Paliativos* (Palliative Care), D003142 *Comunicação* (Communication), inserted with the Boolean operator "AND".

For the selection of articles, the titles and abstracts were read, considering the following inclusion criteria: studies published from 2012 to mid-2017, that continuously presented palliative extubation in the quality of death process, and those who considered palliative care in an intensive care unit. Documents whose access was restricted to the abstract or title, as well as those that did not contain the information necessary to attend the objectives of the present study, were excluded.

Documents related to palliative care and palliative extubation, selected at random from the WHO, were also included, given their relevance to the preparation of this study. The articles included were submitted to descriptive analyses, according to the year and content of the publications.

RESULTS

Through the search strategy, using the scientific descriptors mentioned, 84 scientific documents were found on the PubMed platform, 23 studies on Embase, 14 on Cochrane, and 11 on the Scielo. They were analyzed according to the inclusion and exclusion criteria (Image 1).

19 articles were considered in their entirety, as described in Table 1. One was the WHO National Cancer Control Program, that was not included. From the 19 articles considered, 33.33% presented palliative care associated with quality of death, 38.88% presented palliative care in the intensive care unit, and 27.77% discussed palliative extubation for a better quality of death.

In the articles selected, the importance of a well-prepared multidisciplinary team was observed, as well as that of good communication with the family and patient, and the outcome of a palliative extubation in the quality of death. In turn, studies show two realities:
- the difficulties that health professionals have in accepting and dealing with the death of patients, as well as the challenge that is communicating this moment to family members;
- the difficulty that these professionals, especially in Brazil, have in conducting research with rigorous and adequate methodological designs in the referred subject, which, consequently, reflects in the outcome of this study.

Image 1. Search strategies about extubation, from 2012 to 2017. Franca, 2018.

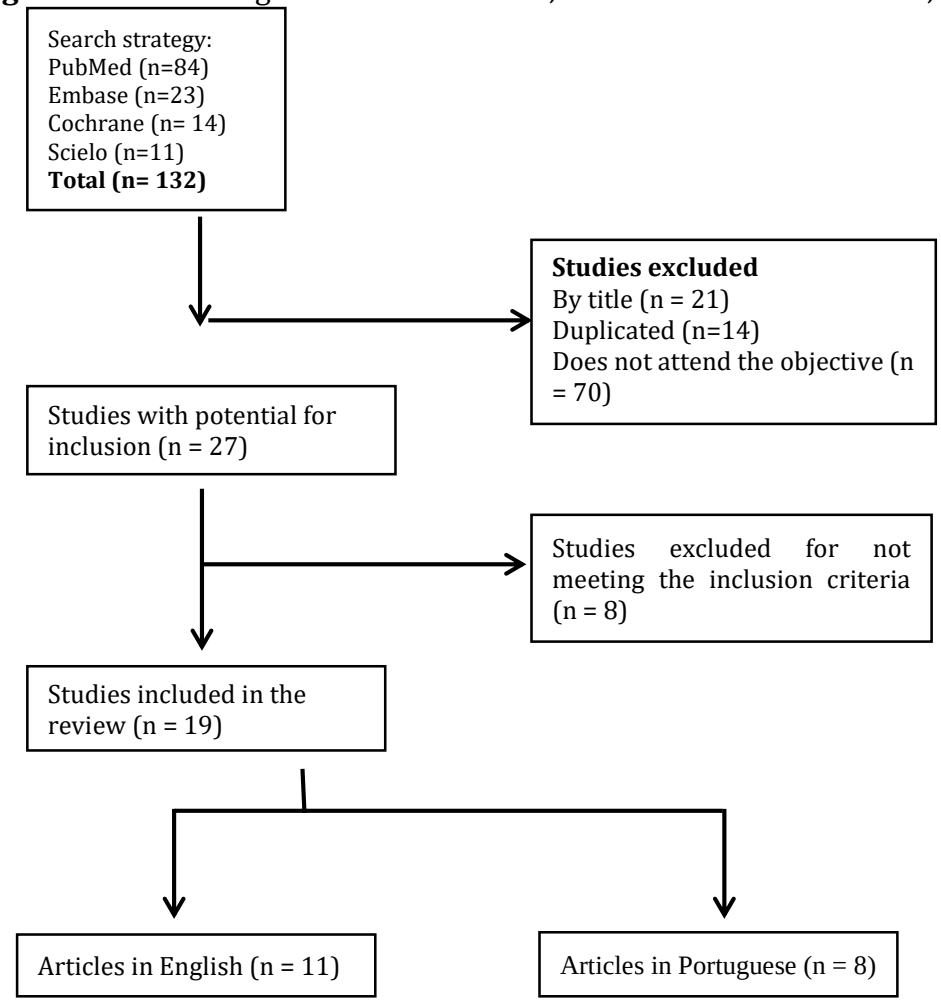

Table 1. Articles from 2012 to 2017 about palliative extubation in the quality of death included in the review. Franca, 2018.

Article	Day	Country	Authors	Objectives	Relevant results
Critically ill cancer patient in intensive care unit: issues that arise [1]	2014	Grecia	Kostakou E, Rovina N, Kyriakopoulou M, Koulouris NG, Koutsoukou A.	To observe palliative care when there seems to be no possibility of cure.	Additional studies are needed to assess long-term medical outcomes, quality of life, autonomy and dignity in these patients.
O lidar com a morte em unidade de terapia intensiva: dificuldades relatadas por enfermeiros 2	2016	Brazil	Lacerda CA, Camboim FEF, Camboim JCA, Nunes EM, Bezerra ALD, Sousa MNA	To analyze the difficulties faced by intensive care nurses in dealing with death.	It is necessary to prepare nurses both spiritually and interpersonally, since this subject is little explored and full of challgenges.
Palliative care for the seriously ill [4]	2015	United States	Kelley AS, Morrison RS.	To observe the progress of palliative care for critically ill patients.	New community-based palliative care models are emerging, public and professional knowledge needs to be addressed so that care can be improved.
Cuidados paliativos 5	2016	Brazil	Gomes A L Z, OTheroii M B.	To study the former and current concepts and principles related to palliative care.	Care must be something to be shared, and not only by those who work in health or other areas of knowledge, but throughout society.
Dying with Dignity in the Intensive Care Unit [6]	2014	Canada	Cook D, Rocker G.	From a review article, the aim was to address the concept of dignity for patients who die in the ICU.	Professionals must ensure that patients are assisted during the death process so that it occurs with dignity, creating connections that will be remembered by family members long after death. Humanized care is requested from all ICU participants.
Respiratory Therapists' Experiences and Attitudes Regarding Terminal Extubations and End-of-Life Care [7]	2016	Georgia	Grandhige AP, Timmer M, O'Neill MJ, Binney ZO, Quest TE.	To investigate the experiences of respiratory therapists at two academic medical centers about palliative extubations.	Respiratory therapists are rarely involved in discussions, despite their desire to be. They usually experience situations that cause discomfort. There is a demand for training therapists to care for terminally ill patients.
O conhecimento de estratégias de comunicação no atendimento à dimensao emocional em cuidados paliativos 8	2012	Brazil	Araujo MMT, Silva MJP.	To investigate the knowledge and the use of communication strategies in the care of the emotional dimension of the patient under palliative care.	It was concluded that there is little knowledge and unsatisfactory use of communication strategies by health professionals in caring for the emotional dimension of patients under palliative care.
Compassionate extubation for a peaceful death in the setting of a community hospital: a case-series study [9]	2015	China	Kok V C.	To observe, from a case study, peaceful deaths in a public hospital.	The study was carried out according to the protocol and the mean time between extubation and death varies depending on the patient. It varied from 0.3 hours in patients admitted after extrahospital cardiac arrest to 97 hours in patients with advanced cancer.

Factors Associated With Family Satisfaction With End-of-Life Care in the ICU [10]	2015	United States	Hinkle LJ , Bosslet GT , Torke AM	To conduct a review, synthesizing published data and identifying factors associated with family satisfaction with end-of-life care in critically ill adult populations.	Good communication, support for shared decision-making and specific patient care measures were associated with greater satisfaction with end-of-life care.
Recommendations to limit life support: a national survey of critical care physicians [11]	2012		Brush DR, Rasinski KA, Hall JB, Alexander GC .	To explore practices and attitudes self-reported by doctors regarding the limits of life support.	The wishes of recommendations of the head physicians and whether doctors agree with the probable decisions regarding life support can have a great influence on decision making, raising questions about whether the recommendations are followed.
Protocol in the management of critical illness [12]	2012	United States	Chang SY, Sevransky J, Martin GS .	To examine the advantages and disadvantages of a care protocol, and to show that this implementation benefits the patients.	The advantages of the protocols can be maximized by their careful development and implementation, by the adequate identification of suitable patient populations and by the incorporation of educational components.
Cuidados paliativos: a comunicação como estratégia de cuidado para o paciente em fase terminal [13]	2013	Brazil	Andrade C G Costa S F G Lopes M E L	To find out how nurses communicate, in a palliative care situation, when assisting a terminally ill patient.	It was concluded that communication is an effective element of care for the terminally ill patient and is extreme important for the promotion of palliative care. Through the testimonies of nurses participating in the study, it was observed that they see the interpersonal relationship with the terminally ill patient and his family as an essential tool for the promotion of palliative care in this stage of life. This relationship allows the professionals to clarify doubts, through simple and accessible verbal and non-verbal language, so that patients express their anxieties and fears. Another point worth mentioning is the recognition, by some nurses involved in the research, of the family's participation in the process of caring for the terminally ill patient.
Limitação de Suporte Avançado de Vida em pacientes admitidos em unidade de terapia intensiva com cuidados paliativos integrados [14]	2016	Brazil	Mazutti S R G, Nascimento A F, Fumis R RL	To estimate the incidence of Advanced Life Support limitations in critically ill patients admitted to an intensive care unit with integrated palliative care.	The contribution of an integrated palliative care program for the intensive care unit was relevant for the practice of orthothanasia, that is, the non-extension of the life of terminal patients by artificial means.
Qual a importância dos Cuidados Paliativos nos Cuidados intensivos? [15]	2015	Brazil	Catalão D F G.	To consult the literature on the importance of applying palliative care in	The use of Palliative Care in Intensive Care Units increases the satisfaction of families, reduces the length of stay in these units, and the use of futile measures , which are withdrawn earlier, reducing hospital costs without changing mortality.

				Intensive Care Units and their impact on the patient, family, and medical staff.	
Managing end-of-life decision making in intensive care medicine – a perspective from Charite Hospital [16]	2012	Germany	Graw JA, Spies CD, Wernecke KD, Braun JP	To observe end-of-life decision-making in intensive care at a Charite hospital in Germany	At the ICU, end-of-life procedures were performed individually. However, they follow a pattern of shared decision making. The enactment of a law on advance guidelines did not affect the decision-making process in end-of-life situations, nor did it affect the population's advanced care planning habits. However, this led to greater bureaucracy associated with end-of-life situations in the ICU.
Pediatric Critical Care Transport as a Conduit to Terminal Extubation at Home: A Case Series [17]	2017	United States	Noje C, Bernier M, Costabile P M, Klein B L .Kudchadkar S R.	To present the experience of the medical center with three PICU palliative intensive care transports for terminal extubation.	Although a relatively infrequent practice in critical pediatric care, transporting patients home for terminal extubation represents a viable alternative for families seeking end-of-life care outside the hospital for their critically-ill children who depend on technology.
Análise descritiva dos pacientes submetidos à extubação paliativa [18]	2015	Brazil	Rebelatto G.	To evaluate the clinical-demographic profile of patients who went through palliative extubations in the ICU of the University Hospital of the Universidade Federal de Santa Catarina (HU / UFSC).	The patients who were extubated were older, affected especially by neurological diseases, and the average time between extubation and death was 2.5 days.
Factors Associated with Palliative Withdrawal of Mechanical Ventilation and Time to Death after Withdrawa [19]	2013	United States	Huynh T N, Walling A M, Le T X, Kleerup E C, Liu H, Wenger N S	To identify factors associated with palliative withdrawal from mechanical ventilation and the time until death after extubation.	Palliative removal of mechanical ventilation was performed in only half of the patients with failing mechanical ventilation. Since clinical services, instead of physiological parameters, are associated with withdrawal, targeted interventions can improve withdrawal decisions.

DISCUSSION

Palliative extubation is a way to find comfort for a better quality of death. It has been gaining space in terminally ill patients in the ICU. One of the studies revealed[13] that patients and their families often wish to be able to spend the last moments at home, surrounded by family and friends. This setting shows that what patients want is nothing more than comfort, company, good mood, and conversations. Another study reports that, in some cases, it is possible to respect this request. However, this is not the reality of Brazil, since it is often difficult to satisfy this desire. Some actions encourage patient and family satisfaction in the ICU environment, and should be encouraged[14].

A study[16] showed that extubation allows the patient to be free from this unwanted procedure, allowing greater communication between patient and family, shortening the process of death when healing is no longer an option and treatments causes pain and suffering. The family, sometimes, interpret, the noisy breathing of the patient as discomfort, which can be seen as a negative aspect of the extubation. However, another study[10] found that family members reported greater satisfaction when they were allowed to stay for longer during decision-making reunions and during the extubation process. For this reason, the health team needs to monitor the patient, since sedatives and techniques to reduce pain and discomfort can be used[10,15,16].

A study[17] was carried out at the Johns Hopkins Hospital, with three pediatric patients and their families, who wanted to spend their last moments at home. Palliative extubation was performed by a palliative respiratory therapist, who reported that the three patients died peacefully shortly after extubation. However, their comfort was assured and they were surrounded by their family, providing compassionate, peaceful, and sensitive care at the end of life. Five stages of extubation outside the ICU highlighted the importance of pre-planning and effective communication with family and team members. These stages were, introduction of the withdrawal, pre-transfer preparation, extubation, post-extubation care, and quality of death care[17].

Another study, carried out in Florianópolis[18], reported that 53.8% of the patients who died received a palliative treatment. However, the decision to perform a palliative extubation decision took place in only 3.35% of the unit's total number of deaths. Most professionals who work in the ICU associate the wellbeing of dyspnoic patients with oxygen supplies and MV. The lack of capacitation of the professionals makes them associate the withdrawal of MV to the concept of euthanasia. The low rates of palliative extubation found in the study confirm these statements. The study also found that the time of death after palliative extubation varied from minutes to days, reaching a maximum of 6 to 9 days[18].

When evaluating the decision for palliative extubation, professionals are concerned that this will bring stress to the patients' family members. However, recent studies point in the other direction, showing that the members of the families of patients who died after palliative extubation in the ICU reported less symptoms of depression. Unfortunately, even with the evidence that palliative extubation brings comfort to patients and their families, cultural and religious factors encourage dysthanasia[9,19].

CONCLUSION

Palliative extubation, when used correctly, with the help of the entire multidisciplinary team and in common agreement with family members, aimed at fulfilling the desire of the patient, is extremely important. It offers a better quality of death to these people when their treatment is no longer possible and would only prolong their suffering and that of their family members.

The limitations of this review are the low number of studies related to palliative extubation, the heterogeneity of the studies, and the small and scarecely controlled samples.

This reiterates that this procedure can be misunderstood by family members and, often, by other health professionals.

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CONTRIBUTIONS
Mariana Fernandes Peixoto contributed to the conception, design, analysis and interpretation of data and writing. **Beatriz Paschoini de Andrade Silva** and **Fabio Bruno Silva Nascimento** participated in the study design. **Daniela Santana Polati da Silveira** worked in the analysis and interpretation of data and review.

How to cite this article (Vancouver)
Peixoto MF, Nascimento FBS, Silva BPA, Silveira DSP. The benefits of palliative extubation on the quality of death REFACS [Internet]. 2020 [cited in *insert day, month and of access*]; 8(2):307-316. Available from: *insert access link* DOI: *insert DOI link*.

How to cite this article (ABNT)
PEIXOTO, M. F.; NASCIMENTO, F. B. S.; SILVA, B. P. A.; SILVEIRA, D. S. P. The benefits of palliative extubation on the quality of death **REFACS**, Uberaba, MG, v. 8, n. 2, p. 307-316, 2020. Available from *insert access link*. Access on: *insert day, month and of access*. DOI: *insert DOI link*.

How to cite this article (APA)
Peixoto, M.F., Nascimento, F.B.S., Silva, B.P.A., & Silveira, D.S.P. (2020). The benefits of palliative extubation on the quality of death *REFACS*, 8(2), 307-316. Recovered in: *insert day, month and of access* from *insert access link*. DOI: *insert DOI link*.