Case report

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Home extubation in a terminally ill older patient visiting emergency department

Abstract

This case report highlights the possibility of discharging terminally ill and intubated patients from the emergency department (ED) for home extubation. Many barriers exist in the ED that hinder home extubation for elderly palliative patients. Patients intubated in the ED are typically admitted to an intensive care unit or hospice. However, the presented case is of a 93-year-old female patient brought to the ED due to altered consciousness, who experienced a sudden cardiac arrest, and subsequently received resuscitation and intubation. The patient's family expressed their desire to have her discharged for end-of-life care at home. By establishing effective communication and cooperation between a palliative care team, the ED staff, and the family members, a discharge care plan was developed to facilitate home extubation. The patient passed away peacefully within 40 hours of extubation, surrounded by her loved ones. This case exemplifies the feasibility of discharging terminally ill and intubated patients discharging from the ED for home extubation.

Keywords: emergency department, extubation, palliative care

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Introduction

The emergency department (ED) is often frequented by terminally ill older patients nearing the end of life, who present with uncontrolled symptoms such as pain, seizures, and haematemesis. Unfortunately, instead of providing comfort and symptomatic relief, ED staff may proceed with interventions that go against the patients' advanced care plans, such as cardiopulmonary resuscitation and intubation. Once intubated, it becomes challenging to have these patients extubated, whether in the ED or a different clinical and non-clinical environment. Extensive literature reviews have documented various barriers in the ED that hinder the provision of palliative care (PC) to these patients. These barriers encompass environmental factors, the structure of the ED, care systems, interdisciplinary collaboration, and inadequate education and training [1, 2].

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From the healthcare perspective, ED staff often feel ill-equipped to look after dying patients, believing their primary role is to save lives and feeling overwhelmed due to time constrain and the focus on providing immediate care to acutely unwell patients [3]. Organizational barriers include a lack of educational training and insufficient support systems [1, 2, 4]. Patients reported perceiving the ED as a noisy and inhospitable environment and identified a lack of communication skills as significant obstacles to receiving quality care [1, 5].

In contrast to home extubation practices in in--patient departments [6], there is a lack of knowledge and experience regarding this process for terminally ill older patients visiting the ED. Typically, intubated patients in the ED are transferred to an intensive care unit (ICU), where PC is initiated [7]. However, some patients express their desire to forgo admission and instead wish to pass away at home. Unfortunately, the complexities of leaving the ED without an endotracheal tube often impede the realization of their wishes. Factors such as insufficient training and education for ED staff, uncertainty about patients' conditions, limited time for effective communication, and the busy atmosphere in the ED make it nearly impossible to facilitate the transfer of intubated patients to their homes for end-of-life care.

This report aims to describe a process that ED staff can employ to discharge intubated patients and facilitate home extubation, thereby enabling these patients to pass away peacefully in the presence of their loved ones. The patient's family member provided informed consent for the publication of this case report concerning their relative.

Case presentation

The case describes a 93-year-old woman who was brought to the ED by her family due to altered consciousness, which persisted for one week before seeking medical attention. The patient had a history of hypertension but had chosen to discontinue medical management for the past year due to declining functional capacity and increasing reliance on caregivers. In the last three months, she required total care from her caregivers. Prior to the ED visit, the patient denied symptoms such as pain, dyspnoea, or fever. However, upon arrival at the ED, she suffered a cardiac arrest, possibly from chronic gastrointestinal blood loss. The ED staff promptly initiated resuscitation efforts and subsequently performed intubation. Following the successful resuscitation, the family members expressed their refusal of further treatment and declined hospital admission. Instead, they requested that the ED staff discharge the patient to allow her to pass away at home.

Typically, the ED staff has two options for managing intubated patients. The first option involves admitting patients to the intensive care unit (ICU) for stabilization, while the second option entails transferring them to a hospice or PC ward. However, both of these options conflicted with the family's wishes. Discharging an intubated patient from the ED to their home for extubation is challenging, particularly for patients nearing the end of life. There is a lack of experience in this area, and existing protocols may discourage ED staff from pursuing such a course of action. In this case, the family did not want the extubation to take place in the ED due to concerns about the patient potentially dying during transportation.

Home extubation is a complex process that requires effective communication and cooperation among the ED staff, the PC team, and the family members. To facilitate this process, the PC team assessed the patient's symptoms and collaborated with the ED staff and the family members to develop a discharge plan. As the patient did not exhibit signs of distress, pain, or difficulty breathing, the PC team followed the discharge process for in-patients undergoing home extubation. This included discussions with the family members about the process and potential events that could occur during transportation and after extubation, preparation of medications for extubation (morphine injection, midazolam, and atropine eye drops), provision of necessary documents (medical certificate, medical notes, emergency contact numbers), and arranging patient transportation.

Following the meeting, the intubated patient was safely transported to her home, where her family members were eagerly awaiting her arrival. The PC team provided the family with the necessary time and space to say their goodbyes. Since the patient did not have a history of dyspnoea or difficulty breathing, no pre-medication was administered before the extubation. After the successful extubation, the patient did not exhibit tachypnoea. The patient was closely observed for 30 minutes before the PC team left. Forty hours later, the patient passed away peacefully, without any signs of suffering. The family members expressed gratitude for the support provided by the PC team throughout the process.

Discussion

Patients receiving PC are often admitted to ED due to worsening symptoms. According to one study [8], 51% and 75% of PC patients visited the ED in the last month and last six months of their lives, respectively.

Table 1. A six-step process and expected outcomes of home extubation in patients visiting an emergency department

No.	Steps	Expected outcomes
1.	Symptom assessment	Comprehensive plan for symptom management before and after extubation
2.	Team meeting between PC and ED staff	Coordinated and collaborative care plan for the patient as a team
3.	Family meeting	A care plan and necessary documents in place
4.	Transport	Patient safety ensured during transport
5.	Home extubation	Patient's comfort and safety maintained during the procedure
6.	Grief management	Emotional support provided to the family following the patient's passing

PC — palliative care; ED — emergency department

The same study reported that, among these patients, 77% were admitted to the hospital, and 68% of those admitted passed away. Another study reported that 40.7% of PC patients coming to ED died in a hospital [9]. The prevalence of ED visits among PC patients has been reported to range from 13.2% to 25% [10, 11]. However, it is important to note that the availability of data relating to this subject is currently limited [12].

Given the primary focus of the emergency department (ED) on saving lives, the provision of PC services is often limited. The ED staff may find it challenging to deliver high-quality care addressing the specific needs of terminally ill older patients and their families while attending to other patients with life-threatening conditions. Intubated patients in the ED often encounter obstacles that make it difficult to adhere to their advanced care plans and undergo extubation [1]. As a result, intubated patients are typically admitted to an intensive care unit (ICU) or a hospice, as the possibility of home extubation seems unattainable. Previous reports on the extubation of patients admitted to the ED have primarily focused on processes implemented for in-patients in the ICU [6, 7].

In response to the family's strong desire to bring their loved one home for a peaceful passing surrounded by the family, the PC team worked collaboratively with the ED staff to devise a solution through effective communication and cooperation. Building on their experience, the author proposes a six-step process for facilitating home extubation of patients admitted to ED. This process includes the following steps:

1. Symptom assessment — conduct a comprehensive assessment of the patient's symptoms and overall condition to ensure readiness for home extubation.
2. Multidisciplinary meeting between PC and ED staff — facilitate a meeting between the PC team and ED staff to discuss the patient's case, establish clear communication channels, and coordinate the necessary resources for successful home extubation.
3. Family meeting — engage in a compassionate and open discussion with the patient's family, addressing their concerns, explaining the process of home extubation, and ensuring their understanding and consent.
4. Transportation — arrange for safe and comfortable transportation of the patient from the ED to their home, considering their medical needs during the journey.
5. Home extubation — perform the extubation procedure in the patient's home, ensuring appropriate monitoring and supportive care to maintain their comfort and safety.
6. Grief management — provide emotional support and bereavement resources to the family following the patient's passing, assisting them in coping with their loss.

Table 1 summarizes this process and the expected outcomes for home extubation in patients visiting the ED. This process not only fulfilled the family's wishes but also alleviated the burden on the ED staff in managing this case. It is worth noting that our actions complied with Section 12 of the National Health Act of Thailand of 2007 [13], giving Thai citizens the right to make an advance directive (AD) stating the care they want or do not want to receive during the end of life and allowing physicians to follow their AD. Ultimately, the family was able to share a meaningful final 40-hour period with their loved one, who passed away peacefully at home without experiencing undue suffering. This report demonstrates that implementing a protocol for home extubation, similar to those utilized for in-patients, can also be applied to intubated patients in the ED.

Conclusions

This case report highlights the possibility of home extubation for intubated ED patients through effective

communication and cooperation among the ED staff, PC teams, patients, and their family members. It suggests the need for future studies to develop a specific protocol for home extubation in the ED for intubated patients, evaluate its effectiveness, and identify barriers and facilitators to its implementation. Interventions aimed at improving care coordination among the ED staff, PC teams, and other relevant stakeholders are necessary to enhance the likelihood of successful home extubation in this patient population.

Article information and declarations

Ethics statement

The patient's relative permitted the author to publish the manuscript and signed the informed consent form.

Author contributions

Pasitpon Vatcharavongvan: a corresponding author who prepared, drafted, and revised the manuscript.

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Conflict of interest

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Supplementary material

None.

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