

End-of-Life Care in the Emergency Department

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Abstract

The Emergency Department has been an increasingly common site for end-of-life care. Many emergency physicians do not feel adequately prepared to deal with the issues specific to terminal care, and many departments are not designed physically or philosophically for these patients. The author reviews end of life care in the ED, and offers guidelines for the management of patients who are actively dying and for whom no life-prolonging measures are available or appropriate.

MeSH Words:

The emergency department (ED) is typically seen as a setting for acute and frequently intensive management of patients. However, the ED is increasingly used as a place in which, less by design than because of prevailing resource issues, patients are allowed to die (15). Medical management of the dying patient is traditionally the role of the palliative care service, which may take place on a conventional medical or surgical inpatient unit, or in a designated Palliative Care Unit. There is a growing need for Emergency Physicians to be comfortable in managing those patients for whom there is no prospect of curative treatment. At present, there is a paucity of literature regarding terminal care in the ED (16).

Increasing demands for inpatient hospital beds commonly result in a lack of appropriate beds for patients in the final stages of life (17), and so the emergency physician (EP) may be called upon to treat patients with problems and needs far removed from those traditionally encountered in the ED. Other patients may present in a condition which is incompatible with survival, and because of the imminence of death, the patient may be kept in the ED to die.

Patients presenting in a moribund condition and requiring end-of-life care in the ED can broadly be classified into three groups:

The “classical” palliative care patient is often suffering from a malignant illness, commonly in

the advanced stages of the disease process. These patients, and their families or proxies, have usually had time to consider the illness and have frequently made decisions regarding advanced directives for terminal care – which may or may not accompany the patient upon presentation. They will frequently need to be managed in the Emergency Department because of an acute crisis and deterioration in condition, an inability to manage symptoms, or due to an inability to access a more appropriate bed, such as on a palliative care, family medicine or acute medical unit.

The second group comprises patients suffering from chronic illnesses, such as COPD, renal disease, neurodegenerative disorder or congestive heart failure (18), who present because of a deterioration or exacerbation. In this setting the patient, or a family member or proxy, may decide against treatment aimed at prolonging life, and a need for end-of-life care may arise.

The third group would consist of patients more commonly experienced in a critical care setting – frequently diagnosed after an acute catastrophic event, such as an intracranial hemorrhage, massive head injury, cardiogenic shock or ruptured aortic aneurysm, and it may be decided that further management would be futile. In these settings, aggressive management is either withdrawn or not started, and is replaced by comfort measures.

Diagnosis of Terminal Event

The first step in determining feasibility of withdrawal of life-prolonging care is diagnosing an imminently fatal process. It is important to reach an informed decision regarding the severity of the disease or injury early, so that “active” management can either be started in a timely fashion, or be withheld and replaced by appropriate comfort measures.

Clinical signs which would indicate the terminal phase include decreased level of consciousness, weakness and fatigue, agitation, dyspnea, stridor, agonal respiration, hypotension, incontinence of stool or urine, mottling of the skin and peripheral cooling (19).

Investigations such as CT scan (indicating a massive event incompatible with survival, such

as intracranial bleed or ruptured aortic aneurysm), ECG or laboratory investigations may need to be interpreted in a rapid fashion to allow appropriate discussion with any available next-of-kin and discuss with them the severity of the condition and presumed futility of further active treatment.

Decision Not to Pursue Active Management

The presence of advanced directives, such as a “living will” indicating that the patient has made an informed decision regarding resuscitation and end-of-life care prior to the presenting incident, may direct the attending physician not to proceed with active care at an early stage.

In many instances, the patient may be lucid enough to communicate and indicate their wishes to the physician and/or next of kin. However, it will often be necessary to have discussions with the family or next of kin of the patient, and to indicate the severity of the patient’s condition and the belief that further active treatment would not be productive (4). This can often be presented to the next of kin in a way that does not necessarily give them the option of intensive management and resuscitation, but still allows them to play an active role in the decision-making around the way that the patient will be looked after. The importance of communication with next-of-kin that is careful and concise, yet supportive and empathetic, is not to be understated (5).

Some patients, despite having an underlying terminal illness or a pre-existing directive, may be candidates for interventions aimed at symptom relief (such as administration of intravenous fluids in dehydration) or diagnosis and management of treatable conditions which may offer both improved quality of life and relief of symptoms (such as treatment of infection or electrolyte imbalance). Careful consideration should be given to the overall clinical condition, realistic options, and the wishes of the patient and next-of-kin or decision-makers. Each case should be individually assessed and judged on its own merits.

Some physicians may feel uncomfortable making a decision of this magnitude, and there is often the option of consulting other professional colleagues and obtaining advice from them. These resources may be as easily available as the

opinions of nursing and auxiliary staff, or may involve speaking to the patient's family physician, other EPs, consultants in relevant specialties, or a clinical bioethicist.

Support

Early consultation with available support staff will often prove valuable, as they frequently have experience in both managing the clinical aspects of the patient's care and liaising with the family. Communication with the primary care physician will often provide greater insight into the specifics of the patient's condition and may give information regarding individual wishes, as well as ongoing issues concerning next-of-kin and home conditions. Medical professionals with relevant experience are to be found within almost every specialty. Experienced nursing staff are invaluable, and departments with access to a social worker will find this to be an important asset. Many patients and their families will request or agree to a pastoral or spiritual worker, and most departments will be able to arrange the appropriate visit at short notice (6).

One of the major benefits of being able to share the workload is that the physician is often able to concentrate on clinical responsibilities; however, the attending Emergency Physician is still ultimately responsible for all aspects of the patient's care, and should not neglect the overall duties of communication and coordination. It is important to bear in mind that there may be different policies regarding assumption of responsibility for the patient, depending on the specific institution.

Many families are unprepared for the final phase of life, regardless of whether the patient has been chronically ill or not, and it is important to assess their beliefs and needs around comfort care and palliation (6). Public misconceptions exist around the role of palliative care, and there is often confusion regarding the terminology used, such as "life support". There may be concerns about euthanasia, and families should have these clarified. It is important to clearly set out the goals of treatment, with an emphasis on the positive (what will be done, i.e. ensuring pain and comfort needs will be looked after) rather than the negative, or what will not be done. Most families will require a large amount of support, as the Emergency Department environment can be very disorienting to them, and they will often

be looking for any available source of hope that they can find (7).

Regardless of how much time is spent with the family members, communication may be less than adequate and it is therefore important to use plain and unambiguous language and terminology wherever possible. Careful documentation of any communications with professional colleagues and particularly family members and caregivers is vital, and should never be overlooked (6).

Comfort Issues

Once the decision has been reached to offer palliation to the patient in the setting of the Emergency Department, comfort becomes the primary concern. One of the first steps is to move the patient to a quiet, appropriately secluded room, if available. Creating a peaceful atmosphere away from the noise and activity of a busy Department will allow medical and support staff a greater sense of calm and create a more dignified environment for all concerned.

It is recommended that "standard" Emergency Department interventions (both investigative and treatment) be ceased immediately, unless there are obvious reasons to perform them. Orders should be given to stop performing laboratory investigations, radiology, ECG's etc., as these are no longer going to have any bearing on the patient's condition or outcome, and are only likely to be a source of stress for next of kin, as well as a source of discomfort for the patient (6).

It should be noted that monitoring equipment, such as cardiac monitors, oxygen saturation probes, blood pressure cuffs etc. should be removed from the patient (6). These will not serve any function in the palliation of the dying patient, and are likely to be sources of discomfort for the patient. Monitoring devices often create a focus of unnecessary attention for family members, who fixate on the data on the screens rather than on their loved one, and are prone to keep asking what the changes in the monitoring values indicate. Simply and unobtrusively removing equipment and replacing them with periodic visual checks and verbal enquiries will ensure sufficient monitoring for the purpose of comfort care.

Intravenous lines should be discontinued (and preferably removed), and any necessary medications given by the subcutaneous route, via an indwelling needle such as a “butterfly” (6). Intravenous fluids do not play a significant role in end-of-life care, and again are only likely to cause pain and discomfort, cause more need for interventional nursing care, and become an issue for families to become concerned about (8,9). Intravenous lines and equipment add to the clutter around the bedside, and may create a physical barrier preventing close contact between the family and their loved one (4,10). Supplementary oxygen via face-mask will often give relief from dyspnea in the hypoxemic patient, and should be used if indicated, but an emphasis on not monitoring SpO₂ levels is made (11).

In some patients, a decision to withdraw mechanical ventilation (intubated and ventilated patients, as well as CPAP or BiPAP) may be made. In these cases, it is important to prepare orders for relief of agitation and dyspnea, and to have prepared families adequately.

Urinary retention may occur in terminally ill patients (particularly men). Many patients will require bladder catheterization in the final stages of life, and this should be considered as a comfort measure. Incontinence (urinary and fecal) is often present as death becomes imminent, and attention to keeping the patient clean and dry will maximize dignity and minimize familial distress.

Patients may require frequent repositioning and turning to stay comfortable, and if they are in pain, they may need analgesia prior to any movement being instituted. It is recommended that patients be positioned with slight elevation of the head of the bed, and the body turned partially to one side. Good support of the shoulders and trunk area is encouraged.

Dehydration and dry oral mucus membranes frequently occur, and good mouth care (wetting the lips, swabbing the oral cavity etc) will assist in avoiding discomfort (12). This may be a role which the family can play, increasing close contact towards the end of life, and allowing them to feel that are a part of the team providing care. The next of kin are often left without any sense of being able to help, particularly in a busy and confusing environment, and asking them to

perform simple tasks involving personal care can give them a sense of empowerment (4).

Dentures should be removed in the semi-conscious patient. They are only likely to cause discomfort and possibly obstruct the airway, and are not likely to cause any improvement in communication at the terminal stage.

Medication

Because patients requiring emergency department palliation may have almost any underlying cause for their being in the terminal phase, it is impossible to provide a comprehensive list of potential problems and management strategies. Common sense and an individualized approach will help most Emergency Physicians to manage their patients in a caring and appropriate manner.

Analgesia

75% of all dying patients will have pain requiring opioid analgesia in the final stage of life (7). In the setting of the Emergency Department, patients are likely to have medications prescribed in doses commonly used for acute pain, and many terminally ill patients may have long histories of opioid analgesic use with tolerance to extremely high doses. Emergency physicians more accustomed to prescribing to opioid naïve patients may be hesitant to order the high dosages that many patients are used to. As a rough guideline, the prescribed dose in a patient already using opioid analgesia should be 10% of the total daily dose, administered every 30-60 minutes as needed (13).

Early and frequent administration of small doses of narcotics is likely to prevent any visible suffering by the patient, and thus minimize family concerns regarding comfort.

In patients entering the final phase in the Emergency Department, it is best to avoid oral and rectal routes of analgesic administration (14). Opioid analgesics should probably be administered via the subcutaneous route (15). In patients already using morphine, the subcutaneous dose should be calculated at approximately 50% of the oral dose (16). Patients with existing transdermal analgesia (e.g. fentanyl patches) should not have them removed (14).

Dyspnea

Many patients become short of breath and experience labored respiration towards the end of life. While there are various causes for this – lung disease, congestion or effusion, local tumor effects or metabolic acidosis due to multi-system failure – at this stage, efforts should be concentrated on relief of the symptom rather than the etiology.

Morphine has been shown to be effective in relieving dyspnea, particularly in end-stage neoplastic disease (17,18). Subcutaneous administration should be instituted once this has been recognized as a symptom (19).

Agitation

Patients may become agitated as they approach death. Small doses of benzodiazepines (most commonly midazolam or lorazepam) are useful in settling the patient (20,21). Haloperidol is often used, as it has the added advantage of reducing nausea and vomiting. Morphine and other opioids should not be used for pure sedation, as they may increase agitation (21).

Secretions

Many dying patients (up to 92%) (4,22,23) may have pooling of secretions in the oropharynx, and be unable to swallow or expectorate them, due to weakness or underlying disease. This may

lead to gurgling or bubbling, and the so-called “death rattle”. This often occurs in the patient with an altered level of consciousness, and while it does not affect the patients themselves, it can be very distressing for any family members present (24).

While aspiration of secretions may provide temporary relief for a few minutes, it is relatively invasive and unpleasant for family members. A better strategy may be to prevent formation of secretions by administering anti-cholinergics (25), preferably via the subcutaneous route. Up to 50% of all terminally ill patients in the final 48 hours of life will receive hyoscine hydrobromide (Scopolamine) for this purpose (26). Alternatively, glycopyrrolate or atropine may be used. Nebulised saline may be helpful if a dry cough or sticky secretions are present, but should be avoided in bronchospasm (14).

Nausea/vomiting

Nausea and vomiting may occur in the final stage, either due to opioid administration or due to the local and central effects of end-stage disease. Haloperidol is often successfully used to treat symptoms, particularly those related to medications. Other anti-emetics such as metoclopramide (in cases of gastrointestinal stasis) may be used. Steroids (dexamethasone), anti-histamines (dimenhydrinate or cyclizine) and phenothiazines (promethazine) may prove useful in treating vomiting due to raised intracranial pressure) (14).

Table 1: Suggested drugs for use in end-of-life care

This is a list of drugs suggested for use in the terminal phase of life. The assumption is that oral medications are no longer possible or practical. The subcutaneous route has been chosen for all preparations for ease of administration, efficiency, patient comfort and reduction of multiple access points. All medication selection must consider existing and predicted symptoms, pre-existing and concomitant pharmacotherapy, dosages and routes.

Some medications, such as diamorphine (heroin), are frequently used in the setting of severe pain and end-of-life care, but are not available in all countries. The following drugs have been chosen for their universal availability in most EDs.

| Medication | Use | Dose | Route |
|----------------|---------------------|--|-------|
| Morphine | Pain, Dyspnea | 2-5 mg titrated q15-30min as needed | Sc |
| Scopolamine | Secretions | 0.4-0.6 mg q4-6h | Sc |
| Midazolam | Agitation | 2.5-10 mg q2-4h | Sc |
| Lorazepam | Agitation | 0.5 mg q2-4h | Sc |
| Haloperidol | Agitation, Delirium | 2.5-5 mg q4-6h | Sc |
| Metoclopramide | Nausea & vomiting | 10 mg q6h | Sc |

mg = milligrams, sc = subcutaneously

TABLE 2: Care pathway for end-of-life care in the Emergency Department

| Recognition of terminal event |
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| 1. Assessment of survivability |
| 2. Advance directives |
| 3. Discussion with family/proxy |
| 4. Consultation with others |
| Decision to palliate |
| 5. Quiet, secluded location – if available |
| 6. Positioning – slightly on side |
| 7. Discontinue monitoring |
| 8. Discontinue investigations |
| 9. Discontinue IV fluids and medications |
| 10. Subcutaneous access |
| 11. Oxygen via facemask |
| 12. Catheter |
| 13. Extubate, if applicable |
| 14. Pain – morphine |
| 15. Agitation – Midazolam / Lorazepam |
| 16. Nausea – Haloperidol / Metoclopramide |
| 17. Congestion/secretions – scopolamine |
| 18. Frequent reassessment |

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- Acknowledgements:**
- Thanks to Dr Paul McIntyre and the members of the Division of Palliative Medicine at Dalhousie University and the Queen Elizabeth II Health Sciences Centre for their advice and support.
- This manuscript has been peer reviewed
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