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Characteristics of palliative care consultation at an academic level one trauma center

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ABSTRACT

Background: The current status of palliative care consultation for trauma patients has not been well characterized. We hypothesized that palliative care consultation currently is requested for patients too late to have any clinical significance.

Methods: A retrospective chart review was performed for traumatically injured patients' ≥18 years of age who received palliative care consultation at an academic medical center during a one-year period.

Results: The palliative care team evaluated 82 patients with a median age of 60 years. Pain and end of life were the most common reasons for consultation; interventions performed included delirium management and discussions about nutritional support. For decedents, median interval from palliative care consultation to death was 1 day. Twenty seven patients died (11 in the palliative care unit, 16 in an ICU). Nine patients were discharged to hospice.

Conclusions: Most consultations were performed for pain and end of life management in the last 24 h of life, demonstrating the opportunity to engage the palliative care service earlier in the course of hospitalization.

1. Introduction

Traumatic injury is the third leading cause of death in the United States for all age groups[1] with 214,008 deaths from trauma in 2015.[2] Patients surviving devastating injuries can suffer from permanent disability.[3] Furthermore, in the last decade there has been a shift from in-hospital mortality to out-of-hospital mortality.[4] In this evolving context, palliative medicine is increasingly recognized by national organizations as providing meaningful benefit to patients with traumatic injury. On a recent survey conducted by the Eastern Association for the Surgery of Trauma, palliative medicine was perceived as an underutilized resource.[5] The American College of Surgeons Trauma Quality Improvement Project has encouraged increased involvement of palliative medicine in their last recommendations.[6]

Despite enthusiasm for incorporating palliative medicine in this population, the current state of palliative medicine is not well characterized in patients with traumatic injury. Substantial variability exists between institutions, with some centers describing very robust and comprehensive palliative medicine involvement while others have limited or no access to specialist palliative medicine.[7,8]

Describing the characteristics of the current population seen in

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consultation, the reasons for referral stated by the trauma physicians, and interventions by the palliative team can provide a basis for identifying future opportunities and refining the model of care. The objectives of this study were to define the population of trauma patients that currently receive palliative consultation at an academic center and the types of palliative interventions performed. We hypothesized that, palliative care consultation was primarily requested for dying patients at the end of their clinical course.

2. Material and methods

This was a retrospective review of a prospectively maintained database with additional retrospective chart review focused on patients with traumatic injury who received palliative care consultation during a one-year period. The Virginia Commonwealth University trauma registry was used to identify all patients with traumatic injury who received a palliative medicine consultation between April 1, 2015, and March 31, 2016. The registry records all consultations performed, including palliative care consultations. Patient characteristics such as demographics, initial Injury Severity Score (ISS), initial Glasgow Coma Scale (GCS), outcome (alive or dead), and disposition were obtained.

A chart review was performed by a single physician with board certification in both surgery and palliative medicine to obtain additional information. Data were collected regarding the reason for consultation described by the primary team and the interventions accomplished by the palliative care team, including opioid management, management of other symptoms, and disposition planning. In order to establish broad themes in management, interventions were grouped together regardless of whether they were recommendations made by the palliative care team or resulted in changes in orders/care plan. Additional information was also collected regarding history of substance abuse or chronic pain. Median and inter-quartile ranges or frequencies and percentages were reported for all summaries. Descriptive statistics were calculated using IBM Statistical Package for the Social Science (SPSS). This study was reviewed and approved by the Institutional Review Board of Virginia Commonwealth University Health System. All elements of consent were waived.

At this academic trauma center, which is the only level one trauma center in central Virginia, the palliative care program was established over twenty years ago. The palliative care consult service consists of an attending physician, Hospice and Palliative Medicine fellow, advance care provider, social worker and chaplain. Residents from Anesthesiology, Hematology and Oncology, and Internal Medicine also participate at varying times throughout the year. During the study time period, requests for consultation were delivered either through the electronic medical record or via pager and telephone discussion. Telephone consultations are available 24 h a day, seven days a week. Patients are seen seven days a week between the hours of 8am and 5pm, usually within two to 4 h of request.

3. Results

Eighty-seven patients were seen by the palliative care team during the 12 months. One patient who was an inmate and 4 patients who were <18 years of age were excluded. Two patients had no injuries that could be coded, and therefore no ISS was calculated. Seven patients did not have a GCS listed in the trauma registry, but the initial GCS was obtained by chart review.

The median age was 60 (inter-quartile range (IQR) 36–77) and 60% of patients were male (see Table 1). The median GCS was 14.5 (IQR 6–15), and median ISS was 25 (IQR 10–33). 70% of patients were transported from the scene of injury within the local metropolitan area, and 30% were inter-facility transfers. Only 44% of the patients arrived as the highest level trauma activation. The most common mechanisms of injury were ground-level falls and motor vehicle crash (MVC); although there were a number of other, less common injury mechanisms (Table 2).

The majority (62%) of consultations initially took place in the intensive care unit (ICU) although 35% were initially seen on the surgical floor (Table 1). One patient was seen in the emergency department and admitted directly to the palliative care unit after goals of care discussions had taken place there.

The median time from admission to palliative care consultation was 4.5 days (IQR 2–12). In the 27 patients who died, the median time from palliative care consultation to death was 1 day (IQR 0–3). The median number of visits from the palliative care team was 2 (see Table 1). The median time to consultation for patients that died was 2 days (IQR 1–10).

Table 1
Characteristics of patients seen by palliative care consult team.

Characteristic	Median	Interquartile Range (IQR)
Age (years)	60	36–77
Injury Severity Score	25	10–33
Glasgow Coma Scale	14.5	6–15
Length of Stay (days)	13	6–23
Time to PCC[a] (days)	4.5	2–12
Time from PCC to death (days)	1	0–3
Number of Visits	2	1–3
	N	**%**
Consult purpose		
Pain focused	32	39
Comprehensive	50	61
Gender		
Male	49	60%
Female	33	40%
Location of consult		
Intensive Care Unit	51	62%
Acute care unit	29	35%
ED[b]	1	1%
Transitional care unit	1	1%
Health outcome		
Alive	55	67
Dead	27	33
Discharged to Hospice	9	11

Note: Abbreviations.
[a] Palliative Care Consult.
[b] Emergency Department.

Table 2
Mechanisms of injury for trauma patients seen by palliative care consult team.

	N	%
Fall	37	45
MVC[a]	20	24
Burn	6	7
MCC[b]	5	6
Gunshot wound	3	4
High Fall	2	2
Stab	2	2
Pedestrian struck	2	2
Other	2	2
Moped	1	1
Bicyclist struck	1	1
Hanging	1	1

Abbreviations.
[a] Motor Vehicle Crash.
[b] Motor Cycle Crash.