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End of Life Discussion in Patients with Severe Traumatic Brain Injury

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Introduction

Neurosurgeons caring for severe traumatic brain injury (TBI) patients often lead end of life care discussions. These end of life discussions are warrented in cases with very poor progoses. Little is known about this specific group of TBI patients, and how goal of care decisions - Comfort Measures Only, Do Not Resuscitate/Do Not Intubate (DNR/DNI), Full Code - are reached by the family and care team. This study investigates the current state of end of life discussion in patients with severe TBI.

Methods

All patients from 2012 to 2016 with a severe TBI and at least one documented end of life care discussion at a single academic institution in the US were included in this retrospective analysis. We abstracted patient characteristics, parameters of injury severity, course of care details, and parameters of the end of life meetings. The examination of meeting characteristics included services and family members present, outcome, location, meeting frequency, and total number of meetings, in addition to other metrics.

Results

Data from 68 patients were analyzed. 66% had a GCS of 3. The mean age was 63. Only 9% of patients had an advanced directive in place. Having a Health Care Proxy (HCP) in place did not make it more likely to make a decision during the first end of life dicussion (p=0.388), however those with an HCP were more likely to be made CMO at any meetin (p=0.008). 32% of patients who had an end-of-life discussion during their admission underwent a neurosurgical intervention. 75% of the meetings were held in the ICU and 16% in the ED. The locations within each department (either at bedside or elsewhere) varied greatly. 73% of these patients died prior to discharge. The median time between terminal extubation and death was 4 hours and 17 minutes (excludes patients taken for organ donation). Patients whose surrogate decision maker opted for continued care had a tracheostomy and feeding tube placed and were discharged to a long term care facility. Ultimately, 79% of the patient population died prior to scheduled first follow-up visit.

Care Decision Changes

First Meeting Decision	Last Meeting Decision			
	CMO	DNR/DNI	Modified DNR/DNI	Full Code
DNR/DNI	5	0	0	0
Modified DNR/DNI	7	0	2	1
Full Code	4	0	1	3
No decision made	3	0	0	3

For those patients who had more than one end of life meeting, the goal of care decision often changed between the first meeting and the last. No patients who were made CMO at the first meeting had an additional meeting.

Conclusions

Only 32% of patients underwent a surgical procedure indicating that end of life discussion can help prevent life prolonging but not life restoring surgeries. Patient that underwent surgery has a high mortality but If the desicion was made to continue care patients survived. Understanding end of life discussions can improve goal-concordant care and prevent unnecessariy surgeries.

Learning Objectives

1. Describe the importance of end of life discussion.
2. Know about parameters that influence end of life discussion.
3. Be informed about ubiquity of unnecessary procedures in this patient group.

References

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