

Increased Symptom Expression among Patients with Delirium Admitted to an Acute Palliative Care Unit
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ABSTRACT

Introduction: Delirium is the most common neuropsychiatric condition in very ill patients and those at the end of life. Previous case reports found that delirium-induced disinhibition may lead to overexpression of symptoms. It negatively affects communication between patients, family members, and the medical team and can sometimes lead to inappropriate interventions. Better understanding would result in improved care. Our aim was to determine the effect of delirium on the reporting of symptom severity in patients with advanced cancer.

Methods: We reviewed 329 consecutive patients admitted to the acute palliative care unit (APCU) without a diagnosis of delirium from January to December 2011. Demographics, Memorial Delirium Assessment Scale, Eastern Cooperative Oncology Group (ECOG) Performance status, and Edmonton Symptom Assessment Scale (ESAS) on two time points were collected. The first time point was on admission and the second time point for group A was day one (+two days) of delirium. For group B, the second time point was within two to four days before discharge from the APCU. Patients who developed delirium and those who did not develop delirium during the entire course of admission were compared using chi-squared test and Wilcoxon rank-sum test. Paired *t*-test was used to assess if the change of ESAS from baseline to follow-up was associated with delirium.

Results: Ninety-six of 329 (29%) patients developed delirium during their admission to the APCU. The median time to delirium was two days. There was no difference in the length of stay in the APCU for both groups. Patients who did not have delirium expressed improvement in all their symptoms, while those who developed delirium during hospitalization showed no improvement in physical symptoms and worsening in depression, anxiety, appetite, and well-being.

Conclusion: Patients with delirium reported no improvement or worsening symptoms compared to patients without delirium. Screening for delirium is important in patients who continue to report worsening symptoms despite appropriate management.

STRENGTHS

- Used validated assessment tools such as the ESAS, ECOG, and MDAS to assess symptoms, functional status, and presence of delirium.
- Large sample size with equally represented gender groups and a diverse racial background
- Limited previous research evaluating the effect of delirium on symptom reporting.

WEAKNESSES

- Only looked at patient with advanced cancer
- Retrospective design may have missed information relevant to symptom expression discussions.
- ESAS was only completed at two point in the study and a more longitudinal approach may have better demonstrated a symptom pattern or the symptoms in patients after delirium had resolved.
- ESAS did not indicate who completed the evaluation (patient vs family vs staff).

RELEVANCE TO PALLIATIVE MEDICINE

- Delirium is very common in palliative care setting and can affect ability to provide good symptom control.
- Limited number of studies that suggest that delirium affects patient reporting of symptoms.
- Similar patient care setting, assessment tools, and patient type when compared to our unit at the TPCU.
- Demonstrates the need to find ways to better evaluate symptoms in delirious patients.

TABLE 1. COMPARISON OF DEMOGRAPHICS AND CLINICAL CHARACTERISTICS OF PATIENTS WHO DEVELOPED DELIRIUM AND THOSE WHO DID NOT HAVE DELIRIUM THROUGHOUT ADMISSION

Covariate	Levels	Total, n (%)	Patients without delirium throughout admission, n (%)	Patients who developed delirium, n (%)	p
All patients		329 (100)	233 (70.8)	96 (29.2)	
Gender	Female	180 (54.7)	125 (53.6)	55 (57.3)	0.5461
Age	Mean \pm SD		54.82 \pm 13.8	57.43 \pm 13.6	0.1068
Race	Asian	23 (7.1)	17 (7.4)	6 (6.5)	0.9737
	Black	50 (15.5)	35 (15.3)	15 (16.1)	
	Hispanic	46 (14.3)	34 (14.8)	12 (12.9)	
	White	202 (62.7)	142 (62)	60 (64.5)	
	Other	1 (0.3)	1 (0.4)	0 (0)	
	Unknown	7			
ECOG	1	2 (0.6)	2 (0.9)	0 (0)	<0.0001
	2	33 (10)	29 (12.4)	4 (4.2)	
	3	156 (47.4)	127 (54.5)	29 (30.2)	
	4	138 (41.9)	75 (32.2)	63 (65.6)	
Cancer diagnosis	Hematologic	31 (9.4)	17 (7.3)	14 (14.6)	0.0644
	Solid tumors	262 (79.6)	216 (92.7)	82 (85.4)	
Discharge disposition	Death	80 (24.3)	20 (8.6)	60 (62.5)	<0.0001
	Home	88 (26.7)	85 (36.5)	3 (3.1)	
	Hospice	161 (48.9)	128 (54.9)	33 (34.4)	
Days of stay	Mean \pm SD		6.94 \pm 3.81	7.23 \pm 5.06	0.7739

SD, standard deviation.

TABLE 2. BASELINE ESAS VALUES FOR PATIENTS WHO DEVELOPED DELIRIUM AND THOSE WHO DID NOT HAVE DELIRIUM THROUGHOUT ADMISSION

Covariate	Patients without delirium throughout admission mean \pm SD	Patients who developed delirium mean \pm SD	p
Pain	6.11 \pm 3.09	5.02 \pm 3.15	0.0040
Fatigue	6.48 \pm 2.75	6.13 \pm 3.00	0.4616
Nausea	2.61 \pm 3.23	1.90 \pm 2.87	0.0703
Depression	3.00 \pm 3.14	2.72 \pm 3.24	0.3677
Anxiety	3.80 \pm 3.37	4.42 \pm 3.14	0.1798
Drowsiness	3.32 \pm 3.14	3.40 \pm 3.12	0.9266
Appetite	5.62 \pm 3.39	5.67 \pm 3.52	0.7949
Well-being	5.82 \pm 2.58	5.32 \pm 2.55	0.2687
Dyspnea	3.45 \pm 3.38	4.63 \pm 3.40	0.0115
Sleep	4.85 \pm 3.34	4.52 \pm 3.37	0.5167

ESAS, Edmonton Symptom Assessment Scale.

TABLE 3. COMPARISON OF THE CHANGE IN ESAS VALUES FROM FOLLOW-UP TO BASELINE BETWEEN PATIENTS WHO DEVELOPED DELIRIUM AND THOSE WHO DID NOT HAVE DELIRIUM THROUGHOUT ADMISSION

Covariate	Patients without delirium throughout admission			Patients who developed delirium			
	Median (range)	Mean \pm SD	p ^a	Median (range)	Mean \pm SD	p ^a	p ^b
Pain	-3 (-10 to 5)	-3.01 \pm 2.92	<0.0001	0 (-10 to 10)	0.37 \pm 3.75	0.4	<0.0001
Fatigue	-2 (-10 to 7)	-1.94 \pm 3.45	<0.0001	0 (-5 to 9)	0.79 \pm 3.28	0.2637	0.0002
Nausea	0 (-10 to 6)	2.61 \pm 3.23	<0.0001	0 (-10 to 6)	1.90 \pm 2.87	0.8128	0.0338
Depression	-1 (-10 to 6)	3.00 \pm 3.14	0.0007	1.5 (-5 to 6)	2.72 \pm 3.24	0.0273	0.0007
Anxiety	-1 (-10 to 9)	3.80 \pm 3.37	0.0015	1 (-4 to 10)	4.42 \pm 3.14	0.0235	0.0017
Drowsiness	-1 (-9 to 10)	3.32 \pm 3.14	0.0007	0 (-6 to 7)	3.40 \pm 3.12	0.3308	0.0288
Appetite	-2 (-9 to 7)	5.62 \pm 3.39	<0.0001	1.5 (-5 to 10)	5.67 \pm 3.52	0.0041	<0.0001
Well-being	-1 (-8 to 7)	5.82 \pm 2.58	0.0001	1 (-3 to 8)	5.32 \pm 2.55	0.0469	0.0016
Dyspnea	0 (-10 to 7)	3.45 \pm 3.38	<0.0001	0 (-8 to 6)	4.63 \pm 3.40	0.6308	0.0255
Sleep	-2 (-10 to 6)	4.85 \pm 3.34	<0.0001	1 (-8 to 9)	4.52 \pm 3.37	0.4393	0.0012

^ap was from Wilcoxon signed-rank test, assessing the changes within groups.

^bp was from Wilcoxon rank-sum test, assessing the changes between groups.