

DELIRIUM IN ELDERLY PATIENTS UNDERGOING CHEMOTHERAPY FOR SOLID CANCERS AND LYMPHOMA

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INTRODUCTION

Delirium in geriatric cancer patients is poorly understood.

OBJECTIVES

To determine the incidence and factors associated with delirium in elderly patients undergoing chemotherapy for solid cancers.

METHODS

- A retrospective chart review of consecutive cancer patients ≥ 65 y old.
- Main objective was to identify 20 individuals with solid tumors and lymphomas on chemotherapy or chemo-radiation during 2015.
- Admissions within 30 days of anti-cancer treatment were included.
- Admitting diagnosis included: "Delirium", "Encephalopathy", "Confusion", "Altered mental status".
- Statistical analysis:
- Descriptive and matched pair statistics compared demographics, chemotherapy, medications, comorbidities, and laboratory data between the identified patients and their controls matched by age, gender, and cancer diagnosis.

RESULTS

- N= 123 patients hospitalized in an academic comprehensive cancer center at Cleveland Medical Center, Cleveland, OH.
- Demographics and cancer type are in Table 1.
- Delirium incidence was 7.3% (N= 9/123). N=5 were men.

RESULTS cont.

- The most common hospital admissions were: chemotherapy (22%) and infection (21%).
- 64% received, 24% - chemotherapy and immunotherapy, and 12% - immunotherapy.
- 43% were treated with combinations of 2 agents, and 32% with a single agent only.
- Compared to matched controls, patients with delirium had a higher BUN, more acute kidney injury (AKI defined as $>30\%$ increase in baseline creatinine) and hyponatremia (Fig.1).
- There were trends in worse ECOG PS, lower Hct, Hgb, elevated ALT, AST, and more CAD, CKD stage III, depression, diabetes and UTI.

CONCLUSIONS

- Low delirium incidence in cancer patients ≥ 65 years old within 30 days of chemotherapy was most likely due to delirium underreporting and excellent patient selection prior to chemotherapy.
- The most common admission reasons were infections and chemotherapy.
- Elevated BUN, AKI and hyponatremia were significantly associated with delirium incidence.
- Trends in worse ECOG, anemia, transaminitis and more comorbidities were observed.

Table 1. Patient Demographics

Patients	N = 123	100 %
Age, Median (range)	71 (65-89)	NA
Gender, Females	74	60
Cancer type		
Gastrointestinal	32	25
Colorectal	13/32	
Esophageal, Stomach, Hepatobiliary	11/32	
Pancreas	8/32	
Lymphoma	24	20
Genitourinary	22	18
Ovary, Uterine	11/22	
Prostate	5/22	
Renal, Bladder, Testis	6/22	
Lung	18	15
Breast	15	12
Head and Neck	6	5
Other (Peritoneal, Melanoma, Sarcoma)	6	5

Table 2. Comparison Between Patients with Delirium (D) and Their Matched Controls (C)

Age D	Age C	Gender D, C	Cancer Type D/C	Admission Cause D	Admission Cause C	Treatment D	Treatment C
74	71	M	Lymphoma	Sepsis	Bacteremia Abscess	Ch + I	Ch + I
69	68	M	Lymphoma	Seizure, Sepsis	Ch	Ch + I	Ch + I
65	66	M	Lymphoma	Enc, Hyperbilirubinemia	L1 spinal mass	Ch + I	Ch
66	73	F	Lymphoma	Enc	Ch	Ch + I	Ch + I
68	73	F	Lung	Enc, Fever	Ch-Radiation	Ch	Ch
68	67	M	Lung	Dehydration	Hemoptysis	Ch	Ch
65	67	F	Lung	Enc	Hypoxia, COPD	Ch	Ch
72	71	M	Pancreas/ Stomach	Ch	Respiratory failure	Ch	Ch
71	70	F	Eso, Pancreas/ Pancreas	Hypoglycemia, Anorexia	GI bleed	Ch	Ch

D-Delirium, C-Matched Controls, F-Females, M-Males, Eso- Esophageal, Ch-Chemotherapy, I-Immunotherapy, Enc-Encephalopathy

Fig. 1. Comparison Between Serum Na and Serum Urea (BUN) in Patients with Delirium (D) and Matched Controls (C)

