



MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

Catatonia in Cancer, an Ominous Sign: Case Series and Review of Literature

Kinza Tareen, M.D.,¹ Amanda Pomerantz, D.O.,² Andrew Coulter M.D., M.A.³

¹Department of Psychiatry, Michigan Medicine | ²Department of Psychiatry, Vanderbilt University Medical Center | ³ Department of Psychiatry, University of Pittsburgh Medical Center

Background

Catatonia represents a heterogeneous neuropsychiatric syndrome characterized by both motor and behavioral signs

Upwards of 50% of catatonia presenting in an acute medical setting is attributed to an underlying medical disorder¹

Tumors, paraneoplastic syndromes, CNS lesions, and medications common in the treatment of cancer (i.e., steroids) are associated with catatonia²

Prompt diagnosis and management of catatonia is essential to mitigate potentially lethal complications, especially in the medically vulnerable

We aim to highlight three cases in which catatonia presented as a burgeoning sign of oncologic disease progression and review the extant literature describing catatonia in the setting of oncologic disease

Oncologic Presentation	Catatonic Features
Case 1: 50M with stage IV gastrointestinal stromal tumor with liver metastases s/p resection on ripretinib	Staring, posturing, waxy flexibility, automatic obedience, ambipendency, and perseveration
Case 2: 49F with liver, skin, and bone metastases, s/p radiation on trastuzumab and letrozole	Immobility, mutism, posturing, grimacing, verberation, perseveration, and autonomic instability
Case 3: 78M with stage IV gastroesophageal junction and colon cancer with bone and pulmonary metastases on pembrolizumab	Hypoactive presentation, details of BFCRS not reported

Case Presentations

Case 1

50-year-old male with a history of neurofibromatosis type-1, stage IV gastrointestinal stromal tumor with liver metastases status-post surgical intervention on ripretinib who presented to the emergency department with confusion and new-onset psychosis

- Bush Francis Catatonia Rating Scale (BFCRS) of 15, consistent with hypokinetic catatonia
- Lorazepam challenge with an 80% BFCRS reduction
- Imaging revealed progression of his cancer, prompting transition to hospice and his passing several weeks later

Case 2

49-year-old female with a history of breast cancer with liver, skin, and bone metastases, status-post radiation therapy on trastuzumab and letrozole, admitted from outpatient oncology for altered mentation and anorexia. Consulted for depression.

- Concerns for hypokinetic catatonia with a BFCRS of 14
- 57% BFCRS reduction with initiation of lorazepam, however symptoms continued to worsen despite augmentation
- Following a protracted hospital course, discharged to long term care where she died from cancer treatment-related complications

Case 3

78-year-old male with a history of schizophrenia, stage IV synchronous gastroesophageal junction and colon cancer with bone and pulmonary metastases on pembrolizumab admitted for altered mental status following a solumedrol infusion for immune-related adverse event hepatitis.

- Initial concern for hypokinetic catatonia with a BFCRS of 17
- With limited improvement despite trials of lorazepam, memantine, methylphenidate, amantadine, and zolpidem over a four-week period
- Four ECT treatments, with a 47% reduction in BFCRS, ECT discontinued due to medical complications
- Discharged to hospice where he died from an inoperable duodenal perforation

Review of Literature

Selection of Cases of Catatonia in Malignant Tumors and Metastatic Disease

Reference	Oncologic Presentation	Catatonic Presentation	Management/Outcome
Waller et al. ³	42F with metastatic (cerebral, pulmonary, bone) breast cancer one year post whole brain and gamma knife radiation and chemotherapy	Waxy flexibility, cogwheel rigidity, tremor, stereotypy	Limited response to lorazepam (up to 23mg). Required three ECT treatments. CSF concerning for recurrence of breast cancer, not detailed in full
Arora & Praharaj ⁴	45M found to have butterfly glioma after presenting with catatonia	Withdrawal, posturing, automatic obedience	Limited response to lorazepam (6 mg/day) prompted head imaging which revealing glioma diagnosis
Steinberg ⁵	59F with hypertensive emergency found to have adrenal carcinoma	Unresponsive, waxy flexibility, stereotypy	Catatonia resolved with treatment of hypertensive encephalopathy and haloperidol 2 mg TID. Returned with metastasis, no recurrent catatonia

- Catatonia in the medical setting is most attributed to CNS pathology and often presents with catatonic excitement¹
- Malignancies pose increased risk for delirium, and terminally ill cancer patients are particularly susceptible⁶
- Co-occurring delirium and catatonia or delirium with catatonic feature in medically ill often presents with hypoactive catatonia⁷
- Literature reveals instances of mixed catatonic presentations (hyperactive/hypoactive) in cancer patients at several stages of oncologic disease – including syndrome prompting cancer diagnosis and presentation that triggers workup revealing progression of disease
- Catatonia in cancer patients has been described in patients with history of primary psychotic disorder and without
- Review of literature suggests varying treatment outcomes of catatonia in cancer patients – some benefit from lorazepam, while others present with more refractory catatonia

Discussion

- To date, the literature reflects relatively few instances of catatonia in cancer patients with a range of catatonic presentations
- In all three of our cases, the neuropsychiatric symptoms of catatonia represented the initial signs of disease progression
- Each case of catatonia highlighted in our population was characterized by a hypoactive presentation – features that overlap with delirious catatonia. Perhaps hypoactive catatonia is indicative of oncologic progression – an ominous sign
- A more thorough review of literature detailing the clinical context, catatonic presentation, course, and treatment of catatonia in oncologic patients is warranted
- CL psychiatrist should be mindful of catatonia in cancer and advocate for medical workup to rule out disease progression, when indicated

Acknowledgments

We would like to thank the Cleveland Clinic Department of Psychiatry and Adult Psychiatry Residency Program for their support in our development as CL psychiatrists. Some of the work presented was conducted during our time as trainees at CCF.

References

For a complete list of references please scan the QR code

