

# Aphasia Masquerading as Delirium: A Case of a Dangerous Cardioembolic Event in a Patient with Active Metastatic Cancer

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## Introduction

Non-bacterial thrombotic endocarditis (NBTE) is a rare, likely underdiagnosed non-infectious endocarditis seen in the setting of hypercoagulable states, such as autoimmune disease and advanced malignancy. It is associated with significant morbidity and mortality.<sup>1</sup>

## Case Presentation

77-year-old man with atrial fibrillation on rivaroxaban was admitted for respiratory failure in the setting of newly diagnosed metastatic pancreatic cancer. His respiratory status was stabilized and he was awaiting discharge from the hospital.

He was found to have acute altered mental status and confusion on hospital day 10 with concern for hospital acquired delirium

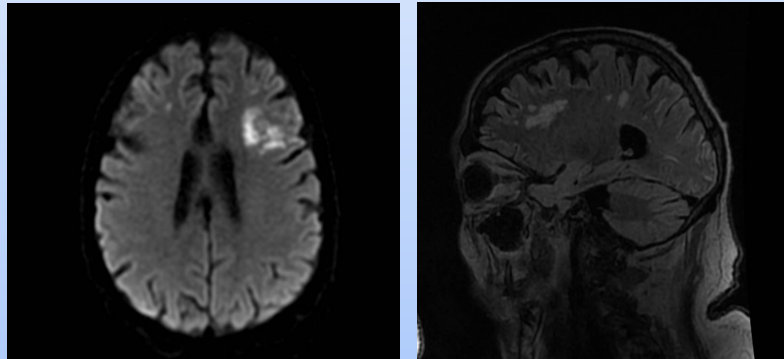
**Pertinent Exam:** Vitals within normal limits. Confused, disoriented, not in distress, able to answer yes and no questions, easily distracted. Strength and sensation intact. Cranial nerves intact.

**Initial Pertinent Labs:** WBC: 12,000/mm<sup>3</sup>, U/A: positive leukocyte esterase, many white blood cells.

**Assessment:** His altered mental status was attributed to infectious delirium from a urinary tract infection. He was started on ceftriaxone for presumed UTI.

## Case Continued

**Update:** His mental status did not improve after several days of antibiotics. Urine cultures grew 1-10k cfu of gram positive growth, making UTI less likely.  
**Exam:** His exam became concerning for aphasia: when asked “do you know where you are,” the patient would respond “2,4,2,4,” concerning for inappropriate perseveration of numbers. Strength and sensation still intact.



**Figure 1:** MRI brain demonstrating acute left frontotemporal lobe infarct.

## References

1. Wang J, Monga N, Mopala P, Husnain M. Development of Nonbacterial Thrombotic Endocarditis While on Systemic Anticoagulation in Pancreatic Cancer: A Case Report. *Cureus*. 2020 Oct 15;12(10):e10967. doi: 10.7759/cureus.10967. PMID: 33209525; PMCID: PMC7667603.
2. Ell-Shami K, Griffiths E, Streiff M. Nonbacterial thrombotic endocarditis in cancer patients: pathogenesis, diagnosis, and treatment. *Oncologist*. 2007 May;12(5):518-23. doi: 10.1634/theoncologist.12-5-518. PMID: 17522239.

## Additional Studies

Transthoracic echocardiogram demonstrated linear independently-mobile echogenic density measuring 1.0 cm on the LV side of the aortic valve (not seen on prior echo one month earlier).  
Negative blood cultures x4  
No other signs or sequelae of endocarditis

## Discussion

Our patient was diagnosed with non-bacterial thrombotic endocarditis in the setting of newly diagnosed metastatic pancreatic cancer. His acute stroke was secondary to NBTE.

The only neurologic deficits from his left frontotemporal stroke was aphasia, which presented like delirium.

An initial infectious workup was within reason given the patient was on therapeutic anticoagulation, thereby making embolic and thrombotic events less likely.

Although the prognosis in these patients is poor, largely in part to the severity of the underlying disease, early recognition and expedited anticoagulation with heparin may lead to prolonged survival or improve quality of life with fewer devastating cardioembolic events.<sup>2</sup>

This case highlights the importance of keeping stroke on the differential for altered mental status *and* recognizing patients at risk for NBTE.