



CONCLAVE Poster Session Abstract Submission

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CONCLAVE Poster Session

Abstract Submission

First Author: Katherine Guillory, DO

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BACKGROUND/INTRODUCTION:

Cobalamin (Vitamin B12) deficiency is a prevalent disorder, especially among the elderly population, that can contribute to neuropsychiatric symptoms. In the context of the COVID-19 pandemic, the role of cobalamin in the pathophysiology of the SARS-CoV-2 virus has gained increased attention. It has also raised questions about the possibility of neuropsychiatric sequelae of the SARS-CoV-2 virus that may mimic cobalamin deficiency. We present a case of an elderly female, with a known recent COVID-19 infection but no known prior history of neuropsychiatric conditions, who presented with new, acute onset confusion, hallucinations and paranoia.

METHODOLOGY:

A 91-year-old Hispanic female with a history of hypothyroidism, type II diabetes mellitus, coronary artery disease, and COVID-19 infection (38 days prior to arrival) presented to the emergency department with a one-week history of behavioral changes including confusion as well as visual and auditory hallucinations. On initial presentation, there were no focal deficits, but the patient did exhibit dry mucous membranes, suprapubic tenderness, confusion, and paranoia. Medical work-up was negative for urinary tract infection, head trauma, and an active COVID-19 infection. Further testing revealed low-normal vitamin B12 of 242 pg/mL (normal: 211-911 pg/mL) and elevated homocysteine (19.1 umol/L; normal: 5-15 umol/L) and methylmalonic acid (0.43 umol/L; normal: 0.00-0.40 umol/L). Vitamin B12 was replenished with a 1000 mcg injection of cyanocobalamin.

RESULTS:

Recognition and treatment of the patient's Vitamin B12 deficiency led to appreciable neuropsychiatric symptom improvement in one hour, and complete resolution within one week.

CONCLUSION/DISCUSSION:

This case highlights the importance of timely diagnosis and treatment of cobalamin deficiency based on the outcome of complete resolution of neuropsychiatric symptoms. Due to the patient's history of COVID-19 infection, we explored the pathophysiology of the SARS-CoV-2 virus and its association with cobalamin that may have contributed to her clinical manifestation. Physicians should consider evaluating patients who present with new onset neuropsychiatric symptoms and/or cobalamin deficiency for COVID-19 infection.

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