









PRESENTED BY:
ALEXANDRA LAURENT, DO

BACKGROUND: A 38 Y/O M WITH SUSPECTED MELAS SYNDROME ADMITTED FOR COGNITIVE DECLINE AND SEIZURES. THE GENETICS TEAM STARTED HIM ON COQ10, RIBOFLAVIN, AND AN L-ARGININE INFUSION IN NEURO- ICU WHICH IMPROVED HIS CLINICAL STATUS. HE WAS DISCHARGED TO ACUTE REHAB ON THESE ORAL MEDICATIONS, HOWEVER DUE TO DIFFICULTIES OBTAINING ARGININE HE DID NOT CONTINUE IT.

FUNCTIONAL OUTCOMES WERE MEASURED BY:

-  COGNITION
-  STRENGTH
-  TRANSFERS
-  GAIT
-  STAIRS
-  VISION

ABSENCE OF ARGININE CAN REVERSE FUNCTIONAL GAINS IN ACUTE REHAB








Case Discussion: MELAS -mitochondrial encephalomyopathy, lactic acidosis, and stroke-like episodes

-Symptoms include muscle weakness, ataxia, and even cognitive impairments

It is thought that these patients can benefit from Arginine to manage the stroke like episodes since it is a precursor to nitric oxide, which acts as a vasodilator, and thus increases cerebral perfusion.

It was proposed that this patient’s suspected underlying genetic disorder coupled with medication noncompliance contributed to his decline during his acute rehabilitation admission. Therefore, a better understanding of MELAS and the treatments could have prevented the patients clinical decline and ultimate transfer out.

This case serves as an opportunity to review the literature on MELAS syndrome to highlight the important clinical characteristics and pathophysiology. A better understanding of the disease will help better serve our patients and could reduce complications and rehospitalizations.

| EXAM | ADMISSION | DISCHARGE TO NSICU | DISCHARGE FROM NSICU |
|---|---|---|--|
|  | ORIENTED TO PERSON PLACE YEAR | ORIENTED TO PERSON PLACE | ORIENTED TO PERSON, PLACE, YEAR |
|  | UPPER AND LOWER EXTREMITIES 5/5 | LOWER EXTREMITIES 4-/5 | UPPER AND LOWER EXTREMITIES 5/5 |
|  | CONTACT GUARD ASSIST | ROLLING WALKER WITH MINIMUM ASSIST | ROLLING WALKER WITH CONTACT GUARD ASSIST |
|  | 100 FT WITHOUT ASSISTIVE DEVICE | 100 FT WITH ROLLING WALKER, MINIMUM ASSIST AND MAXIMUM CUES | 75FT X2 WITH ROLLING WALKER AND MINIMUM TO MODERATE ASSIST |
|  | 4 STEPS WITH HANDRAILS AND CONTACT GUARD ASSIST | 4 STEPS WITH HANDRAILS AND MINIMUM ASSIST | NOT TESTED (DISCHARGED TO DIFFERENT ACUTE REHAB) |
|  | NO VISUAL DEFICITS | PERIPHERAL VISION DEFICITS | NO VISUAL DEFICITS |