Conference
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Title
Challenges of Dry Beriberi: A Case of Multidisciplinary Rehabilitation in a Patient with Thiamine Deficiency Causing Sensorimotor Axonal Polyneuropathy

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Case Diagnosis
We review the pathology of dry beriberi and the complications that sensorimotor neuropathy can create during an inpatient rehabilitation hospitalization.

Case Description
A previously independent 19-year-old female presented to the hospital with vision changes, lack of coordination, diffuse weakness, and paresthesias following a prolonged gastrointestinal illness. The patient was unable to ambulate and required two-person assist with activities of daily living (ADLs). Work-up included extensive bloodwork, MRI of brain and spine, lumbar puncture, and EMG/NCS; results indicated thiamine deficiency with levels at 27.8 nmol/L and a sensorimotor axonal polyneuropathy consistent with dry beriberi. Patient was started on thiamine repletion. Vision and numbness improved, but significant pain, paresthesias, and weakness persisted. She was transferred to an adult inpatient rehabilitation facility for 6 weeks and then discharged to a pediatric inpatient rehabilitation facility.

Discussion
Thiamine plays a crucial role in glucose metabolism and other biochemical pathways. Clinically, deficiency in this vitamin can cause detrimental effects on the cardiovascular and neurological systems. Dry beriberi is one of the clinical disorders associated with this deficiency. Symptoms of this disorder classically begin with distal sensory loss, paresthesias, muscle weakness, and fatigue with symptoms arising within weeks to months. Symptoms can also arise abruptly, mimicking disorders like Guillain-Barre disease, often delaying diagnosis. The sensorimotor sequalae of dry beriberi can lead to severe disability/debility and prevent an individual from fully participating in ADLs. A multidisciplinary approach is essential to appropriately diagnose and treat this condition.

Conclusions
This case demonstrates that thiamine supplementation and medication alone is insufficient in providing appropriate care for patients with dry beriberi. A collaborate approach to rehabilitation is crucial for patients with this diagnosis.