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Polyneuropathy
A Case Presentation
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History

Patient is a 58 year old white female with history of hyperlipidemia and bipolar disorder. She presents with complaint of burning sensation in her hands and feet. Symptoms began nine months ago. Initially, symptoms were present in her feet. Within three months, symptoms were present in her hands. Intensity has increased progressively since onset. Now, the pain is constant and very irritating to the patient. Pain is most intense at night. Symptoms are more intense in the feet than in the hands. Symptoms are equal between sides. Pain that started in the feet has ascended to the level of the knee on the left and mid-calf on the right. Pain that began in the hands had ascended to the level of the wrists bilaterally.

History, Con't.

Patient denies pain at any other location in her body. She reports mild weakness in her hands. She does not remember if she had a respiratory or gastric illness prior to onset of symptoms. She denies history of stroke. She knows of no exposure to toxin. She takes lipitor for hyperlipidemia. In the past, she took lithium for bipolar polar disorder. She stopped taking lithium six months ago and currently is taking no medication for bipolar disorder. She denies family history of neurological disease.

Exam

Physical exam revealed a moderately obese female distressed by her condition. There was no hypertension. Vital signs were normal. Physical exam proved normal. Specifically, there was no scleral icterus, facial or extremity telangiectasias, no muscle atrophy, no extremity edema, distal pulses were present in all extremities, hair was present on the hands and toes. Neurological exam revealed depressed vibratory and positional sense in the left leg to the level of the patella, in the right leg to the level of the malleoli, and in the arms to the level of the radial styloid process. Sensation to touch was reduced on the plantar surface of the feet and in the fingers to the level of the distal interphalangeal joints.

Exam, Con't.

Otherwise, sensation was intact. Deep tendon reflexes were reduced, being measured as 1/4 at the quadriceps, biceps, brachioradialis, and triceps - 0/4 at the soleus. Otherwise, the neurological exam was normal. Cranial nerves were normal. Extremity strength was 5/5 throughout. Toes were downgoing bilaterally. Coordination of finger-to-nose, heel-to-shin, and rapid alternating movements were intact. Gait was normal. Romberg was negative. Patient was unable to perform tandem gait. No labs or imaging was present at time of initial interview.

Differential

1. Diabetes mellitus
2. Toxins
 - Alcohol
3. Medications
 - Lithium
 - Lipitor
4. Infectious
 - Lyme disease
 - HIV

Differential, Con't.

5. Inflammatory
 - GBS
 - CIDP
6. Vasculitis
 - Systemic Necrotizing Vasculitis
 - Wegener's Granulomatosis
7. Collagen Vascular Disease
 - Rheumatoid Arthritis
 - SLE
 - Sjogren's Syndrome

Differential, Con't.

8. Organ Failure
 - Hepatic
 - Renal
9. Vitamin B12 deficiency
10. Hereditary
11. Paraneoplastic neuropathy

Therapeutic Options

Treatment should involve removal of the agent causing the polyneuropathy. In this case, the adenocarcinoma should be removed. Treatment of paresthesia should start with a tricyclic antidepressant such as desipramine 10-50mg qhs. If ineffective, gabapentin should be added. Third line agents include carbamazepine and phenytoin. Tramadol and NSAID can be used for breakthrough pain. Patient should be vigilant for cutaneous injury of the feet as unattended wound can lead to serious infection.