

NEUROLOGIC CASE STUDY

PATIENT PROFILE

Patient: 48-year-old female with a past medical history of classical migraine headaches (migraine with aura), paroxysmal atrial fibrillation, hypothyroidism and depression. As a child in elementary school in the early 1960's, she broke open thermometers under the guidance of her teacher and played with the mercury globules.

She does not smoke and drinks alcohol in moderation. She drinks on average 1 cup of caffeinated coffee per day. She reported a typical American diet containing red meat and poultry, but inadequate consumption of fruits, vegetables and grains; she does not eat seafood. She is of average weight and leads a sedentary life. She works as a technician full-time.

Symptoms: In addition to her migraine-related headaches, the patient noted gradual onset of anosmia (abnormality of smell) in the mid-1990's. Beginning in 2004, the patient experienced unsteadiness and abnormal sensation in both legs, which she described as "insects crawling" on her skin. Several months later she began having difficulty seeing out of her left eye (this was not associated with migraine-related visual auras).

In the summer of 2006, the patient had her gallbladder removed and has since had lingering pains and poor wound healing with increased tachycardia. This patient also reported recurring rashes over her face, and recurring arthralgias of her shoulders, hips and knees.

Over the past several years, she has complained of increasing fatigue and malaise, and noted memory difficulties, emotional instability and occasional dizziness. Within the past year she has experienced xerostomia (dry mouth), keratoconjunctivitis (dry eyes), vaginal dryness and hot flashes. She continues to report normal menses.

Diagnosis: The patient has been evaluated by several neurologists and a rheumatologist, and numerous diagnostic studies have been done [e.g., brain and spine MRI, electrodiagnostic studies of her legs, sural nerve biopsy, spinal fluid evaluation, and bloodwork (including Lyme titers; various studies to assess for rheumatologic disorders; thyroid function tests), all of which have been unremarkable]. Recently, she had blood tests to assess the levels of mercury, zinc, phosphorous, calcium, and magnesium. She was noted to be deficient in zinc.

TREATMENT

The patient started taking a zinc supplement two weeks ago, and thus far has not experienced significant improvement in the severity of her current complaints. However, she has denied any new symptoms.



DISCUSSION

Metabolic/nutritional disorders are often overlooked during evaluation of patients with nonspecific complaints. When diagnostic studies have led to non-conclusive results, patients with these vague complaints are often labeled as having a “functional” (i.e., psychiatric-based) disorder. As symptoms progress, they often become angry and frustrated. Some may see a psychiatrist and start antidepressant medication(s); those who do often exhibit considerable improvement. However, this may not be due to treatment of the depression-related symptoms, but to the analgesic effects many of these medications have. As a result, the true cause of the symptoms remains undetermined.

In the case study above, this patient was found to have a zinc deficiency. She also said that her cholesterol profile had been abnormal (her LDL lipids and triglyceride levels were consistently elevated despite being on a statin medication). Zinc deficiency is a common cause of anosmia, poor wound healing, rashes, arthralgias, malaise, weakness, and cognitive difficulties.

The curious aspect to this patient’s history is her breaking open mercury-containing thermometers while in elementary school. Mercury toxicity has been shown to decrease zinc absorption; however, this patient did not have elevated blood levels of mercury and denies further exposure to mercury-containing products (apart from her dental fillings).

This case study is important because it illustrates that the physician should:

- Always consider nutritional and metabolic causes in patients with unexplained or vague symptoms.
- Take a careful and thorough health history to determine if there may be sufficient concern regarding metabolic, toxic, or nutritional derangements.
- Always ask the patient if she/he is taking unusual supplements or herbs, or if they have a restricted diet (e.g., vegetarian).
- Pay careful attention to abnormalities involving the gastrointestinal system that may point to a malabsorption syndrome and lead to nutritional deficiencies.
- Always analyze urine and blood when evaluating a patient with suspected toxicity due to mercury, arsenic, lead, thallium, nickel, chromium, etc.

For questions or further discussion of the findings in this case study, or to refer a patient to Dr. Mednick, please call (203) 234-1993 or visit www.CTCompNeuro.com.

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Since 2003, Dr. Mednick has provided outstanding neurologic care to the people of North Haven and the surrounding area. He is board certified and is the only neurologist in the area with both an MD and PhD, and extensive fellowship training in stroke, emergency neurology and seizure disorders.

Dr. Mednick’s expertise enables him to analyze neurologic conditions with great accuracy. The result is a more insightful diagnosis and a highly effective, targeted treatment plan.

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