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Seizures in a Patient with Disseminated Histoplasmosis

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ABSTRACT

Disseminated histoplasmosis (DH) occurs in 5% or less cases. Its diagnosis is often overlooked with delayed treatment resulting in increased morbidity and mortality. We present a case of the DH in a 53-year-old man with chronic alcohol use in whom delay in treatment resulted in his death from asystole and seizures.

KEYWORDS

Seizures; Disseminated histoplasmosis

INTRODUCTION

Histoplasma capsulatum, a dimorphic fungus causes Histoplasmosis. It is endemic in the central United States specifically in the Ohio and Mississippi river valleys and in other parts of the world with warm humid soil and large population of migratory birds. It is the most common pulmonary and systemic mycosis of humans. Its varied clinical manifestations from a mild flu-like illness to rapidly progressive, often fatal, disseminated disease (as in our patient) presents a principal challenge to the clinician caring for patients with histoplasmosis to be able to recognize the disease; differentiate it from other disorders and to diagnose as soon as possible to be able to institute early effective treatment [1,2].

CASE REPORT

A 53-year-old man was admitted with a history significant for seizure disorder from a traumatic brain injury, chronic alcohol abuse, and a 60 pk/year smoker with complains of weight loss and hemoptysis. His work-up showed cavitating lung lesions on plain chest X-ray (Figure 1). Chest CT confirmed presence of multiple cavitating lung lesions (Figure 2). He underwent bronchoscopic needle biopsy of the lung lesion which on microscopy showed histoplasma infection (methenamine silver stain, Figure 3). Neurology was consulted as he had a generalize tonic-clonic convulsion. Head MRI showed a single oval lesion in the left cerebral hemisphere (Figure 4). On this admission he weighed 125 lbs, looked pale with a temperature 99, pulse of 90 beats per minute, respiratory rate 20 per minute with normal heart sounds and bilateral coarse breadth sounds with rhonchi. His neurological examination was normal. His admission laboratory tests showed an iron deficiency anemia (Hb: 10.4 g/dl, MCV: 79 fl, serum iron level: 9 µg/dl), hyponatremia (Na: 125 mmol/l), raised liver enzymes (AST: 195 U/L, ALT: 121 U/L), and hypoxia on room air (pO2: 71 mmHg). HIV screen was not done

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as patient refused consent. The patient left against medical advice.

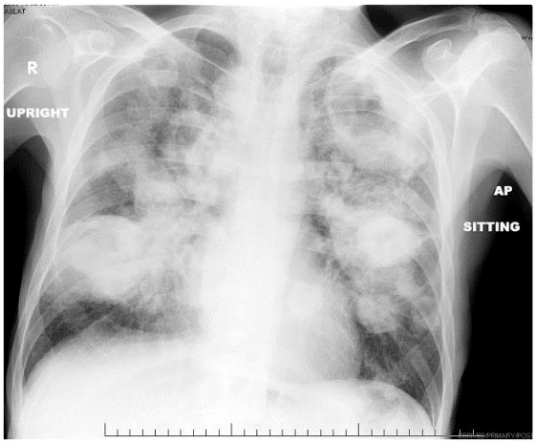

Figure 1: Chest x-ray shows cavitating lung lesions.

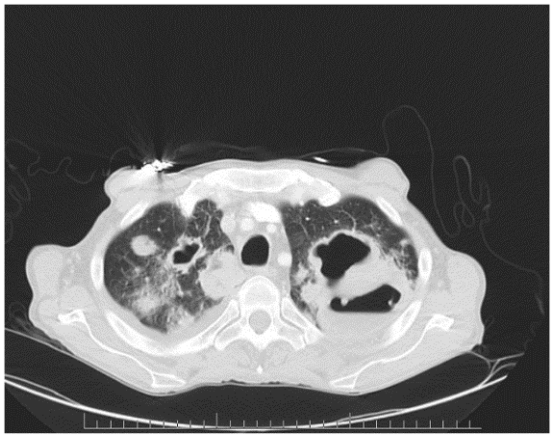

Figure 2: Chest CT shows extensive cavitating lung lesions.

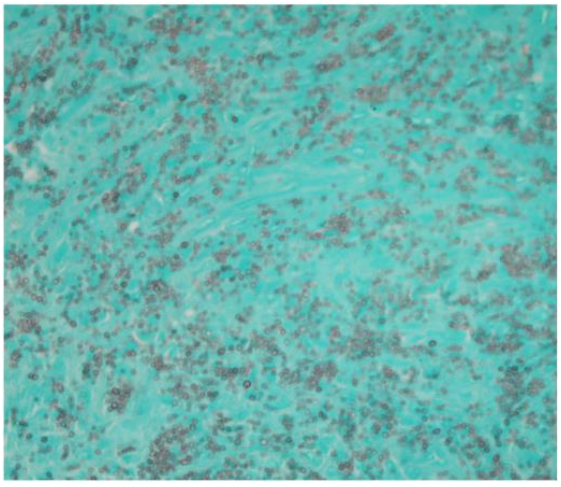

Figure 3: Methenamine silver staining of the bronchoscopic needle biopsy of the lung lesion.

He was re-admitted 4 weeks later because of progressive shortness of breath. Repeat chest X-ray showed a worsening of his cavitating pulmonary lesions. He was started on liposomal amphotericin B and fluconazole. While undergoing treatment he had a cardiac arrest (asystole) and was resuscitated. While in the ICU he started having seizures, which were treated with Ativan and IV Fosphenytoin. Patient passed away few days later.

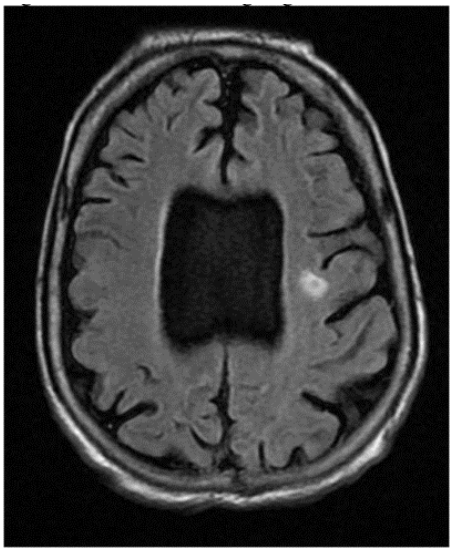

Figure 4: Head MRI showing single oval lesion in the left cerebral hemisphere.

DISCUSSION

Histoplasmosis can occur at any age. In the majority (80%) of cases, it is asymptomatic [1-3]. DM occurs in 5% cases, mainly in those 50-years of age or greater and immunocompromised [3].

Neurological involvement occurs in 5% of cases of DH and mainly presents as basal meningitis with or without hydrocephalus or focal parenchymal brain lesion with stroke-like syndrome. Presence of seizures in DH have not been described before. Seizures in this patient was due to I) his prior history of seizures from traumatic brain injury worsened by II) new focal brain lesion, III) hyponatremia (from adrenal involvement on abdominal

MRI) [4], IV) septicemia, and V) asystole (cardiac arrest) related seizure "Lance-Adams attacks".

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