Neurosarcoidosis Mimicking Meningitis After Sinus Surgery

INTRODUCTION & OBJECTIVES

- Report of unrecognised neurosarcoidosis presenting as chronic sinusitis and meningitis post-op-meningitis
- Describe neurosarcoidosis disease process and otolaryngic manifestations
- Be able to describe potential complications of performing surgery on patient with undiagnosed neurosarcoidosis
- Review signs, symptoms, and diagnosis of neurosarcoidosis

SETTING, POPULATION & STUDY DESIGN

- Tertiary Care Center
- Single Patient Case Report & Review of Literature

Case Report

A 33 y/o African American male with undiagnosed neurosarcoidosis presented our clinic with a history and apparent signs of chronic sinusitis. He had originally been seen as an inpatient consult for severe acute sinusitis and suspected candida. At that time there was suspicion of recent exacerbation but none was ever witnessed and no definitive diagnosis was made nor was any further workup pursued. He now presents with severe generalized headache, blurred vision in the left eye, and a complaint of chronic rhinorrhea with itchy watery eyes. A CT of the sinuses showed opacification of bilateral ethmoids, sphenoid, and right maxillary sinus (Figure 1a&b). He was subsequently taken to the OR for FESS. The procedure was well tolerated and his headaches improved. He looked very good at his post-op day 10 evaluation, however, he was lost to long-term follow-up. He eventually emerged approximately one year later with a clinical picture suggesting recurrence of acute sinusitis with secondary meningitis.

RESULTS

- The patient was successfully diagnosed with neurosarcoidosis and is now being treated but only after initial evaluation for meningitis

DISSCUSSION

Generally, sarcoidosis presents with significant variability from patient to patient depending upon intensity and severity of disease. Common disease involvement are the lymphatic system, cranial nerves, meninges, mucocutaneous, eyes, liver and up to 90% show pulmonary manifestations. Some of the most frequently employed diagnostics are: sedimentation rate and serum ACE levels. ACE level elevation is variable in cases of sarcoidosis – 40 to 90%. Of sarcoidosis cases only 4 to 16% present with CNS involvement ranging from aseptic meningitis, cranial neuropathies, to seizures. Seizures occur in only 20% of cases with neurologic involvement. Diagnosis of neurosarcoidosis can be problematic. Clinical presentation can vary greatly and there is no specific serologic test for the disease. The most specific test is tissue biopsy for the meninges but this is often impractical. There are diagnostic criteria for the diagnosis of neurosarcoidosis:

- Neurologic findings consistent with neurosarcoidosis
- Biopsy showing noncaseating granulomas in any tissue, preferably the meninges
- It is not clear in the few cases reported of concomitant sinonasal sarcoidosis and neurosarcoidosis whether this represents direct spread of the disease or synchronous CNS lesion. Clearly the presentation of neurosarcoidosis can be clouded by the presence.

In the case of this patient, at initial presentation before sinus surgery, the combination of visual changes, diffuse headache, ethnicity, "cerebritis" were odd complaints that may have suggested another disease process was present.

REFERENCES