Cerebral toxoplasmosis in a patient with systemic lupus erythematosus

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Introduction: Atypical cerebral toxoplasmosis, salient complication of systemic lupus erythematosus, most frequently associated with immunocompromised states. Few reports of toxoplasmosis complicating SLE have been reported in the medical literature, as most reports confirmed the diagnosis after autopsy. We introduce a patient with SLE who presented with excruciating headache that worsened over two weeks found to have cerebral toxoplasmosis.

Case: A 37 year old, South Asian female, with a past medical history of SLE complicated by nephritis, cerebritis, hypertension and rheumatoid arthritis on chronic treatment for lupus presented to the emergency department with excruciating headache that had worsened over the last two weeks. Her lupus regimen at this point included mycophenolate 750 mg twice daily, prednisone 10 mg, and hydroxychloroquine. She was having nausea and vomiting and noted an unintentional weight loss of 15 lbs in six months. Vital signs were stable and physical exam was unremarkable. Labs were all within normal limits. Initial CT head revealed multiple ring enhancing masses in the right cerebral hemisphere, with extensive surrounding vasogenic edema causing local mass effect. MRI of the brain with gadolinium showed multiple bilateral brain masses and edema, most extensively in the right temporal lobe. A trans-esophageal echo ruled out the vegetations. The patient was started on dexamethasone and later during the hospital stay she underwent biopsy of the brain. Immunohistochemistry confirmed that the tissue sampled represented toxoplasmosis. The patient was started on pyrimethamine 25 mg and sulfadiazine 500 mg twice daily.

Result & Discussion: This case highlights that patients with SLE, on chronic immunosuppression are at risk of developing opportunistic infections such as cerebral toxoplasmosis. It is important to recognize this risk in such patients given the option for prophylaxis in order to minimize severe outcomes.