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Differential Diagnosis of Tumor-like Brain Lesions

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Abstract

Purpose of review: Tumor-like brain lesions are rare and commonly suggest a neoplastic etiology. Failure to rapidly identify non-neoplastic causes can lead to increased morbidity and mortality. In this review, we describe 10 patients who presented with atypical, non-neoplastic tumor-like brain lesions in which brain biopsy was essential for a correct diagnosis and treatment.

Recent findings: There has been increasing recognition of autoimmune conditions affecting the nervous system, and many of those diseases can cause tumor-like brain lesions. Currently available reports of non-neoplastic tumor-like brain lesions are scarce. Most case series focus on tumefactive demyelinating lesions, and a comprehensive review including other neuroimmunological conditions such as CNS vasculitis, neurosarcoidosis, histiocytic and infectious etiologies is lacking.

Summary: We review the literature on tumor-like brain lesions intending to increase the awareness and differential diagnosis of non-neoplastic brain tumor mimics. We advocate for earlier brain biopsies, which, in our case series, significantly changed diagnosis, management, and outcomes.

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