

## UNUSUAL FINDING OF BRAIN CRYSTALS IN A MULTIPLE SCLEROSIS PATIENT: A CASE REPORT.

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The patient was a previously healthy 30-year-old woman presenting with aphasia, dysarthria, right facial droop and transient arm weakness. CT founded multiple bilateral cerebral lesions. A MRI showed hemispheric and cerebellar enhancing lesions. The radiographic and clinical differential included lymphoma, glioma, MS, and viral encephalitis. Her family history was non-contributory. She was admitted and treated with dexamethasone. Further work-up included a brain biopsy and repeat imaging. Urinalysis performed acutely and at eight months revealed calcium oxalate crystals and increased levels of ethanolamine, alanine, and taurine, but otherwise normal renal function. Lumbar puncture was unremarkable; oligoclonal bands were negative. The cortical biopsy showed abundant achromatic crystals that colocalized with foamy macrophages and chronic inflammatory cells in greatest abundance in the perivascular spaces. There was moderate astrogliosis and focal mild demyelination. No atypical forms were identified, and there was no evidence of an infectious, neoplastic or ischemic process. The composition of the brain crystals remains unknown. The patient has made an excellent recovery and serial MRIs show regression of the inflammatory component.

The findings are felt to be most consistent with MS suggesting the crystals are epiphenomena. Alternatively, the urinalysis findings suggest the possibility of oxalate. Cerebral oxalate crystals are extremely rare and usually associated with primary hyperoxaluria.