CLINICAL PRACTICE

Clinical Images

Toxic Encephalopathy

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Figure 1. FLAIR-weighted magnetic resonance imaging of the brain showing symmetrical areas of hyperintensities involving bilateral lentiform nuclei (white arrow) and thalami (black arrow) consistent with a toxic or metabolic encephalopathy.

An unresponsive 37-year-old man was found to have a high anion gap (39 mEq/L) and osmolar gap (170 mOsm/L) metabolic acidosis (pH 6.5). Urine showed needle-shaped crystals. An empty bottle of ethylene glycol was found at his home. FLAIR-weighted

Figure 2. Lymph node aspirate showed "picket-fence" shaped crystals in a background of lymphocytes under light microscopy.

Figure 3. Lymph node aspirate demonstrated strongly birefringent crystals under polarized light consistent with calcium oxalate monohydrate crystals.

magnetic resonance imaging of the brain (Fig. 1) showed symmetrical areas of hyperintensities involving bilateral lentiform nuclei (white arrow) and thalami (black arrow) consistent with a toxic or metabolic encephalopathy. He was intubated and started on bicarbonate drip, fomepizole and hemodialysis. Phenytoin was initiated for seizures. Two weeks later, he developed high-grade

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fevers with diffuse lymphadenopathy and erythroderma. A presumed diagnosis of phenytoin hypersensitivity was made after a non-diagnostic fine needle aspiration of an axillary lymph node was done. He improved with prednisone and cessation of the phenytoin. Incidentally, the aspirate showed “picket-fence” shaped crystals in a background of lymphocytes under light microscopy (Fig. 2) that were strongly birefringent under polarized light (Fig. 3) consistent with calcium oxalate monohydrate crystals. Calcium oxalate crystals are often found in the urine of patients

with oral ethylene glycol ingestion, but finding of crystals in a lymph node has not been previously described in the literature. He made a complete recovery at discharge.

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