Sulfadiazine-induced crystalluria and non-oliguric renal failure in HIV-1 inaugural infection with presumed cerebral toxoplasmosis

Cristalúria induzida por sulfadiazina e insuficiência renal não oligúrica em infecção inaugural por HIV-1 com toxoplasmose cerebral presumida

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A 30-year-old woman with no previous medical history presented to the emergency department with a seizure and aggressive behavior. After extensive blood work and imaging studies, she was admitted with HIV inaugural infection (CDC stage C3) and cerebral toxoplasmosis. As the first line of treatment, the patient was started on sulfadiazine and pyrimethamine[1–3]. After one week, she developed non-oliguric acute kidney injury. Urinary sediment analysis revealed sulfonamide crystals with the morphologic appearance of shocks of wheat (Figures 1 and 2), confirmed by infrared spectroscopy[4]. Sulfadiazine was replaced with clindamycin, and a notable enhancement was observed after to the implementation of vigorous fluid hydration using an alkaline solution (sodium bicarbonate).

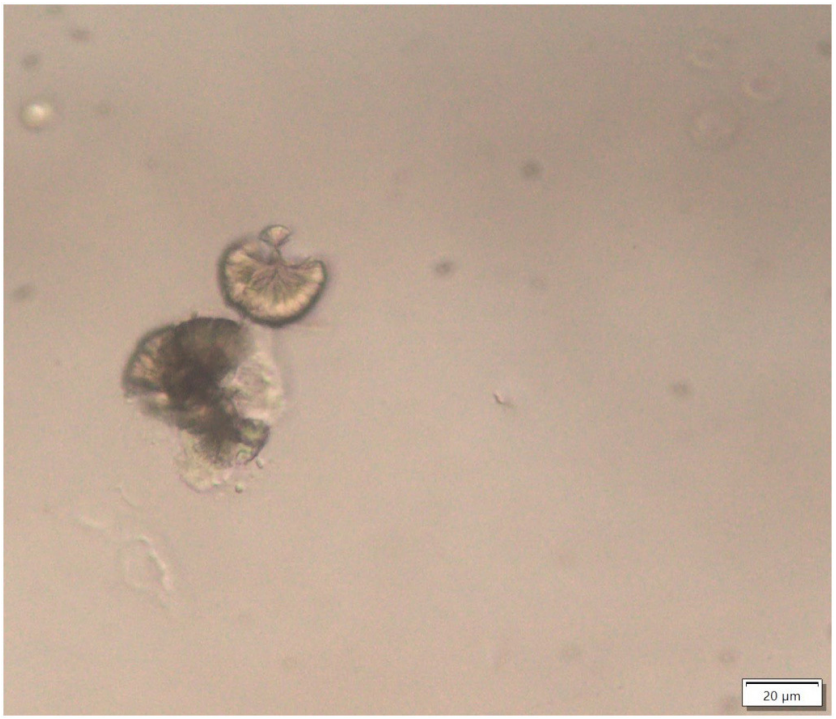

Figure 1. Sulfadiazine crystals have an amber color and radial striations (contrast phase microscopy, 400× magnification). Urinary analysis results – density: 1.008; pH: 5; proteins: 15 mg/dL; hemoglobin: 0.75 mg/dL; nitrites/glucose/ketones/bilirubin/urobilinogen: negative.

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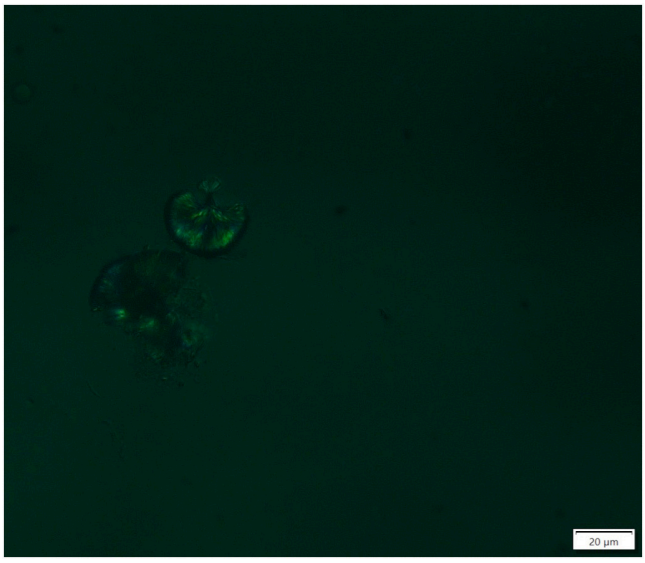

Figure 2. Sulfadiazine crystals are strongly birefringent under polarized light (polarized light, magnification 400×).

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Conflict of Interest

The authors have no conflict of interest to declare.

Authors' Contributions

VG writing of the original draft. NMF, SL writing – review and editing.

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