
P-62 Unrecognized clue: Crystals in the urine in acyclovir-induced renal toxicity.

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INTRODUCTION

Acyclovir is well-known cause of acute kidney injury, especially unless sufficient hydration was performed. We report a case in which urinary crystals by polarizing microscopy immediately recalled acyclovir-associated renal injury and adequate IV hydration could induce early recovery of renal function.

CASE DESCRIPTION

A 34-year-old man was admitted with 2 days history of fever, headache, nausea, and severe nuchal pain (day1). On examination, he was alert and oriented. The temperature was 38.6°C, pulse 77 beats/min, blood pressure 126/83 mmHg, and the respiratory rate 16 breaths/min. Meningeal sign was positive for stiff neck, and neck flexion test. Vesicular rash appeared on his right chest wall. Blood test revealed for WBC 6870/ μ l, CRP 0.01 mg/dl, glucose 119 mg/dl, BUN 18 mg/dl, creatinine 0.9 mg/dl. CSF analysis showed for WBC 1062/ μ L (Neutrophil 1057, Lymph 4), protein 18.6 mg/dl, and glucose 62 mg/dl. Head MRI revealed no significant findings. Herpes zoster and subsequent meningitis were suspected and intravenous acyclovir 500 mg q8h was initiated with 250 ml of normal saline. Initially he had bland urine sediment, but on day 7 his creatinine had elevated to 4.07 mg/dl and developed aseptic pyuria. Interstitial nephritis was suspected, and acyclovir dose was reduced to q12h. Examination of urinary sediment by bipolarizing microscopy showed birefringent needle-shaped crystals, which suggested acyclovir-associated renal injury. After 10 days course of acyclovir therapy with adequate IV hydration, he was fully recovered from meningitis as well as renal impairment.

DISCUSSION

Adequate IV hydration is important for the prevention of acyclovir-associated renal injury. Acyclovir crystals in the urine by bipolarizing microscopy can be a useful diagnostic clue when renal impairment developed.