

ACUTE RENAL FAILURE FROM SPONTANEOUS TUMOR LYSIS SYNDROME IN A PATIENT WITH ADVANCED BRONCHOGENIC CARCINOMA

Chetan Shenoy

Department of Internal Medicine

Guthrie/Robert Packer Hospital, Sayre, Pennsylvania, USA

BACKGROUND: Acute tumor lysis syndrome (ATLS) is a catastrophic oncologic complication due to a rapid destruction of tumor cells with massive release of cellular breakdown products, usually seen after initiation of chemotherapy for hematologic malignancies. This condition is characterized by hyperuricemia, hyperphosphatemia, hyperkalemia, hypocalcemia, metabolic acidosis, and often, acute renal failure from urate nephropathy. Acute Spontaneous Tumor Lysis Syndrome (ASTLS) describes the occurrence of ATLS prior to the institution of therapy and a few cases have been described in the literature in patients with hematologic malignancies and rarely, solid tumors. We report an unusual case of ASTLS in a patient with advanced bronchogenic carcinoma, which led to urate nephropathy and renal failure.

CASE REPORT: A 74-year-old Caucasian male presented to the emergency room due to decreased urine output of less than 100 ml in 24 hours. He was diagnosed with stage 4 bronchogenic carcinoma a few weeks earlier and was scheduled to be started on chemotherapy later in the week. Laboratory tests revealed a blood urea nitrogen of 41 mg/dl (normal = 7-21 mg/dl) and a serum creatinine of 4.7 mg/dl (normal = 0.8-1.5 mg/dl). His serum uric acid was 15.4 (normal = 4.8-8.7 mg/dl) and he also had hyperphosphatemia, hyperkalemia, hypocalcemia and metabolic acidosis. He was promptly initiated on vigorous hydration, allopurinol and hemodialysis. After two dialysis treatments over consecutive days, his renal function became normal. He started chemotherapy the following week.

DISCUSSION/CONCLUSIONS: ASTLS should be considered as a differential diagnosis in patients with malignancies who present with acute renal failure. Poor outcomes in patients with ASTLS and urate nephropathy make early recognition, aggressive management and prompt dialysis mandatory.

Keyword: Acute Tumor Lysis Syndrome, Renal Failure, Hyperuricemia