

SPONTANEOUS TUMOR LYSIS SYNDROME: A CASE FOR CONTINUOUS VENO-VENOUS HEMODIAFILTRATION (CVVHDF) AND RECOMBINANT URATE OXIDASE?

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Tumor lysis syndrome (TLS) is a serious oncologic disorder characterized by severe electrolyte derangements and acute kidney injury. Several cases have been reported with various dialysis modalities in treating TLS. We describe a case of spontaneous TLS treated with CVVHDF and recombinant urate oxidase.

A 44 year old male presented with complaints of fatigue and fever. He had cervical lymphadenopathy and a truncal rash. Pertinent serum chemistries were as follows: potassium 6.7 mmol/L, bicarbonate 7 mmol/dL, bun 134 mg/dL, creatinine 9.93 mg/dL, uric acid 34.8 mg/dL, LDH 2800 U/L. White blood cell count was 32.7 K/uL (59% mononuclear cells). A working diagnosis was lymphoma with associated spontaneous TLS. High flow CVVHDF was the modality of renal replacement therapy. For profound hyperuricemia, recombinant urate oxidase was also given. Serum uric acid had fallen dramatically from 34.8 mg/dL to 6.4 mg/dL after 24 hours of intervention. His renal function recovered with a serum creatinine 0.8 mg/dL at discharge.

Tumor lysis syndrome (TLS) is an oncologic emergency often seen in patients soon after cancer treatment. Although rare, the spontaneous form of TLS may occur (STLS). In recent years urate oxidizers have been studied and used for TLS. CVVHDF is a modality which can prevent metabolic derangement rebounds during STLS versus intermittent hemodialysis. It may also be suggested that profound elevations of uric acid complicated by renal failure in STLS, a urate oxidizer may be indicated to prevent further tubular toxicity from urate crystallization and enhance renal recovery in adjunct to CVVHDF. It is presumed with such marked values of uric acid, enormous tumor burden is volatile and other electrolyte levels may potentially be lethal. The use of CVVHDF in addition to urate oxidase in STLS with marked elevations of uric acid, hyperkalemia, and renal failure should be considered.