

Rapid Fire: Tumor Lysis Syndrome



Sarah B. Dubbs, MD

KEYWORDS

- Tumor lysis syndrome • Uric acid • Rasburicase • Metabolic emergency • Cancer
- Emergency

KEY POINTS

- Tumor lysis syndrome (TLS) is a life-threatening metabolic complication of cancer.
- TLS is characterized by a constellation of metabolic derangements stemming from the release of intracellular products: hyperkalemia, hyperuricemia, hyperphosphatemia, and hypocalcemia.
- These metabolic derangements lead to end-organ damage, including renal failure, dysrhythmias, and neurologic involvement.
- Management is centered on hydration, reduction of uric acid, and treatment of electrolyte abnormalities.

CASE

Pertinent history: A 47-year-old woman with no significant medical history presents for evaluation of progressive fatigue, generalized weakness, nausea, and diffuse muscle cramps for 2 weeks. She denies chest pain or diaphoresis but does say that she now has shortness of breath with minimal exertion. She has not had cough, fevers, abdominal pain, or diarrhea.

Past medical history: no chronic medical problems

Surgical history: cesarean delivery, cholecystectomy

Medications: none

Family history: hypertension in mother and father; no known coronary disease of venous thromboembolism history in family

Social history: no tobacco or illicit drug use; social alcohol use

Pertinent physical examination: Temperature: 37.3; blood pressure: 105/56; heart rate: 112; Respiratory Rate = 21; oxygen saturation as measured by pulse oximetry: 99% on room air

General: alert, ill appearing, oriented \times 3

Disclosure Statement: The author has no relationship with a commercial company that has a direct financial interest in the subject matter or materials discussed in the article or with a company making a competing product.

Department of Emergency Medicine, University of Maryland School of Medicine, 110 South Paca Street, 6th Floor, Suite 200, Baltimore, MD 21201, USA

E-mail address: sdubbs@som.umaryland.edu

Emerg Med Clin N Am 36 (2018) 517–525

<https://doi.org/10.1016/j.emc.2018.04.003>

0733-8627/18/© 2018 Elsevier Inc. All rights reserved.

emed.theclinics.com

Head/Eyes/Ears/Nose/Throat: PERRL, mucous membranes dry, conjunctivae pale
Neck: full range of motion (ROM), neck veins flat

Cardiovascular: regular rhythm, tachycardic, no murmurs/rubs/gallops, distal pulses equal bilaterally

Pulmonary: rate increased but speaks in full sentences; lungs clear with no wheezes, rales, or rhonchi

Abdominal: soft, nontender, nondistended, normal bowel sounds

Neurologic: 5/5 strength and normal sensation throughout

Musculoskeletal: normal pulses throughout, full ROM of all extremities, no significant peripheral edema

Skin: petechial rash scattered on lower extremities

Diagnostic testing: A cardiac workup is initiated.

WBC	58.3 K/mcL
Hgb	9.2 g/dL
Hct	25.4%
Plt	19 K/mcL
ANC	0.9 K/mcL
Na	132 mmol/L
Potassium	7.1 mmol/L
Cl	101 mmol/L
CO ₂	21 mmol/L
Glucose	99 mg/dL
BUN	21 mg/dL
Creatinine	2.3 mg/dL
Calcium	5.1 mg/dL
Troponin	<0.02 ng/mL

Abbreviations: ANC, absolute neutrophil count; BUN, serum urea nitrogen; Cl, chloride; CO₂, carbon dioxide; Hct, hematocrit; Hgb, hemoglobin; Plt, platelet; WBC, white blood cell.

Electrocardiogram (EKG): sinus tachycardia; normal axis and intervals; no ST elevation or depression; T waves peaked and pointed

Chest radiograph: normal

Clinical course: Based on the patient's initial presentation, a cardiac workup was initiated with EKG, laboratory tests, and chest radiograph. The EKG was obtained first and revealed T-wave changes concerning for hyperkalemia. Intravenous calcium was ordered and was administered, as the remainder of the laboratory tests resulted.

The patient was found to have a marked leukocytosis, anemia, and thrombocytopenia, raising suspicion for acute leukemia. An automated differential found her to have profound neutropenia as well. The suspected hyperkalemia was confirmed, and she was also found to have renal failure and low calcium. Additional treatment was ordered for the hyperkalemia. Her troponin was normal, and the chest film did not show signs of overt fluid overload. Additional laboratory studies were ordered to further investigate the patient's metabolic abnormalities.

Download English Version:

<https://daneshyari.com/en/article/8718365>

Download Persian Version:

<https://daneshyari.com/article/8718365>

[Daneshyari.com](https://daneshyari.com)