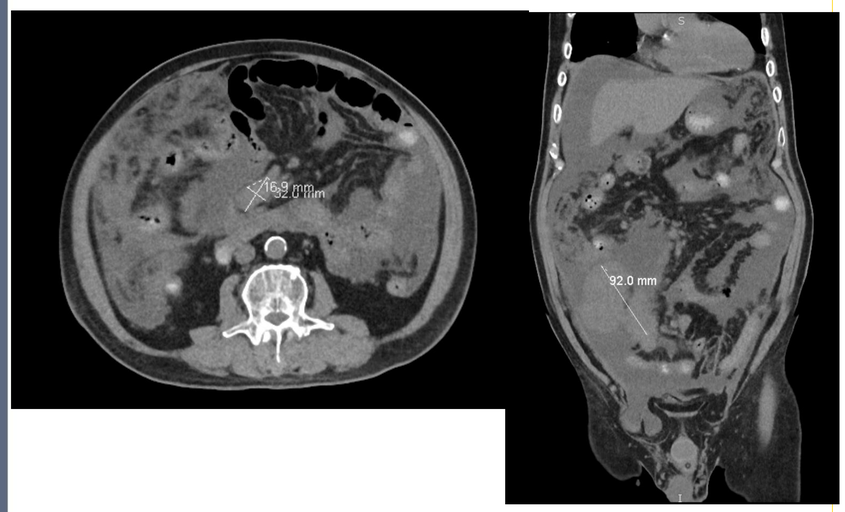
SPONTANEOUS TUMOR LYSIS SYNDROME IN UNDIAGNOSED DIFFUSE LARGE B-CELL LYMPHOMA

Yu-Han Chen, MD; Chadane Thompson, MD; Osman Abdelsadig, MD; Vikas Akkaraju, MD; Megan Kaumaya, MD; Natasha Rastogi, MD

Lab Results and Images

Serum Investigations	Previous Discharge	Results 1	Results 2	Reference Ranges
Potassium (mmol/L)	5.0	5.7	5.6	3.5 – 5.2
Corrected Calcium (mmol/L)	9.9	11.2	11.0	8.4 – 10.3
Phosphorus (mmol/L)	—	4.6	6.0	2.3 – 4.7
Uric acid (mg/dL)	—	14.9	16.2	2.6 – 6.0
LDH (U/L)	1240	1553	1580	125 - 220
Creatinine (mg/dL)	1.42	2.31	3.07	0.72 – 1.25

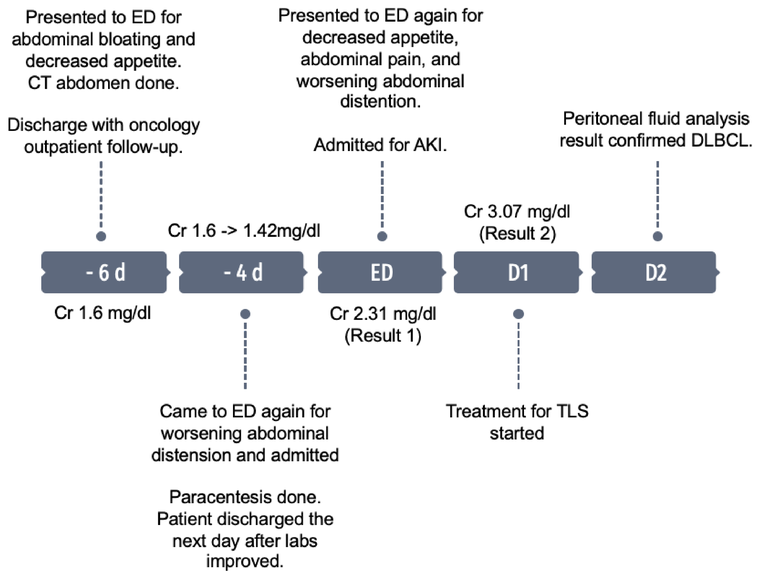


CT finding:

Multiple enlarged mesenteric lymph nodes, measuring 3.2 x 1.7 cm centrally. Ileocecal mass measuring up to 9.2 cm with extension into the pericolonic fat. Moderate ascites.

Case Presentation

81-year-old male with a past medical history of heart failure



Discussion

Cairo-Bishop Definition of Laboratory TLS		
Variables	Value	Change from baseline
Uric Acid	> 8 mg/dL	25 % increase
Potassium	> 6 mmol/L	25 % increase
Phosphorus	> 4.5 mg/dL	25 % increase
Calcium	< 7 mg/dL	25 % decrease

Cairo-Bishop Definition of Clinical TLS		
Creatinine	Cardiac Arrhythmia	Seizure

With an incidence as low as 1.8%, spontaneous TLS is a rare entity, especially with **solid organ malignancies**, and patients often experience **higher mortality rates**.

Timely identification of TLS is crucial because the early initiation of medical treatment aimed at **correcting the metabolic derangements** reduces the likelihood of harmful complications such as cardiac arrhythmia, renal failure, seizures, and even death.

Rasburicase, a recombinant urate oxidase, is the preferred agent over allopurinol for lowering uric acid levels. **Renal replacement therapy** is indicated for electrolyte derangements and renal failure that is refractory to medical therapy.

Conclusion

Spontaneous TLS should be considered among the differential diagnoses in patients with **a known or possible underlying malignancy**, regardless of suspected tumor type, who present with AKI and the typical biochemical abnormalities described without exposure to cytotoxic therapy.

If TLS is highly suspected, prompt management of electrolyte disturbances, hyperuricemia and renal dysfunction is essential to prevent life-threatening complications.

Reference

Rahmani B, Patel S, Seyam O, et al. Current understanding of tumor lysis syndrome. Hematol Oncol. 2019;37(5):537-547. doi:10.1002/hon.2668
Cairo MS, Bishop M. Tumour lysis syndrome: new therapeutic strategies and classification. Br J Haematol. 2004;127(1):3-11. doi:10.1111/j.1365-2141.2004.05094.
Coiffier B, Altman A, Pui CH, Younes A, Cairo MS. Guidelines for the management of pediatric and adult tumor lysis syndrome: an evidence-based review [published correction appears in J Clin Oncol. 2010 Feb 1;28(4):708]. J Clin Oncol. 2008;26(16):2767-2778. doi:10.1200/JCO.2007.15.0177

ENGLEWOOD HOSPITAL | Hackensack Meridian School of Medicine