

Abstract Submission No.: A-0135**Use of Tolvaptan in the Management of Tumor Lysis Syndrome in a patient diagnosed with Myelofibrosis with Acute Myeloid Leukemia transformation****Abigayle Therese Guiritan**, Maria Kristina Alolod, Justine Blanche Chua Ching

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Case Study : Clinical Presentation: 61-year-old female, known case of Myelofibrosis with Acute Myeloid Leukemia (AML) transformation, who had a 2-week history of intermittent productive cough and was initially referred to the nephrology service for oliguria. Work up was done showing azotemia, hyperuricemia, hyponatremia, hyperkalemia, and hypocalcemia. Tumor lysis syndrome (TLS) was highly considered due to high tumor burden and recent initiation of hydroxyurea. She fulfilled the Cairo-Bishop criteria for TLS. Correction for the electrolyte imbalances was done. Ideally, hydration is the cornerstone for the management of TLS. However, she had signs of congestion with hydration. Initially, furosemide was given with relief of symptoms but she also had hyponatremia. IV fluid was shifted to essential fluids and tolvaptan 15mg tablet ½ tablet once a day was started. Patient showed clinical improvement with decreasing creatinine and correction of electrolyte abnormalities. However, she developed hospital acquired pneumonia and eventually opted to withhold further treatment and be discharged against medical advice. Discussion: TLS is a life-threatening metabolic and oncologic emergency that can occur in patients with acute leukemia when tumor cells release their contents into the bloodstream, either spontaneously or in response to therapy. Acute kidney injury is the most common manifestation of tumor lysis syndrome while hyponatremia is the most common electrolyte disorder in clinical practice and is associated with increased morbidity and mortality. Tolvaptan is an arginine vasopressin receptor 2 antagonist that inhibits the action of antidiuretic hormone and results in free water excretion (aquaresis). In a study done by Miyashita et al, they concluded that tolvaptan is sufficient to stabilize sodium levels in SIADH associated with chemotherapy-induced tumor lysis. Conclusion: Tolvaptan can be used in patients who develop tumor lysis syndrome and Syndrome of inappropriate antidiuretic hormone.

Summary of laboratory work ups done.png

Hospital day	Work ups done at the ER	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Creatinine (mg/dL)	1.9	2.39	-	2.12	1.99	-	1.71	2.09	2.40	2.85
Blood Urea Nitrogen (mg/dL)	34	47	-	48	49	-	-	46	-	56
Bicarbonate (mmol/L)	-	20	-	20	21	-	-	28	-	28
Sodium (mmol/L)	130	126	127	129	132	133	134	133	133	133
Potassium (mmol/L)	4.5	6.0	5.1	5.9	4.7	5.3	5.0	4.9	5.4	5.0
Magnesium (mg/dL)	2.4	2.0	-	1.8	-	1.8	2.6	2.3	-	2.3
Ionized Calcium (mmol/L)	1.0	0.98	1.12	-	1.03	-	1.02	1.02	-	1.08
Phosphorus (mg/dL)	-	4.1	-	5.0	4.2	-	-	4.1	-	3.6
Uric Acid (mg/dL)	-	20.10	-	16	-	-	8.6	6.36	-	6.20

Summary of laboratory work ups done.png

