

Definition

Tumor Lysis Syndrome is when large numbers of rapidly dividing cells are killed and release their contents into the bloodstream

Risk Factors

- High tumor burden or bulky tumors
- Cancers highly sensitive to treatment, such as leukemias, high-grade lymphomas, and some solid tumors
- Poor renal function

Clinical Manifestations

- Elevated uric acid, phosphorus, potassium, blood urea nitrogen, and/or creatinine
- Decreased calcium
- Symptoms related to electrolyte abnormalities and renal dysfunction
 - Renal: oliguria, anuria, urine crystals, flank pain
 - Cardiac: ECG changes, dysrhythmias, sudden death
 - Gastrointestinal: nausea, vomiting, diarrhea, anorexia
 - Neuromuscular: cramps, tetany, confusion

Diagnostic Assessment

- Close monitoring of lab results prior to, during, and after treatment

Emergency Interventions – Prompt intervention can avoid life-threatening outcomes

- The best treatment is prevention!
- Hydration with NS or D5W to keep urine output greater than 150–200 ml per hour. Support with loop diuretics.
- Allopurinol (PO) or rasburicase (IV) to lower uric acid concentration. Begin allopurinol 1–2 days before treatment.
- Electrolyte management
- Hemodialysis for acute renal failure

Nursing Considerations

- Monitor lab results closely and assess for symptoms
- Monitor for fluid overload

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