



SAFETY ALERT

Mismanagement of Hyperkalemia/Sepsis

“Sharing Lessons Learned”

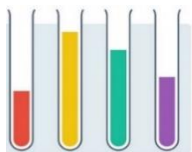
A recent Sentinel Event was reported regarding an Acidotic, Hypercalcemic, and Septic patient who suffered mismanagement due to several tasks and complexity of his case, which led to untimely treatment of his condition and contributed to the patient’s death.

Mismanagement of Hyperkalemia

Situation:



The patient was admitted as a case of Cholangitis and was treated in the Intensive Care Unit for Sepsis, Metabolic Acidosis, and Hyperkalemia. Unfortunately, the inadequate management of sepsis and high Potassium levels lead to the patient’s Cardiac Arrhythmia and death.



Background:

The 75-year-old patient presented to Emergency Department with a Gastrointestinal condition and then shifted to the Intensive Care Unit, due to Hyperkalemia, Metabolic Acidosis, and Sepsis. The patient had a Hemodialysis session and was planned for a CT scan to rule out Bowel Ischemia. While the primary team was carrying out multiple tasks (*preparing the patient for the CT scan and administering medications to correct the acidosis*), a recent VBG/ABG showed a high level of Potassium, followed by an order for correction. However, the order was ineffectively communicated and subsequently carried out around two (2) hours after the order entry.

Assessment:

A Root Cause Analysis was done, and multiple factors contributed to the event:

- Δ Failure in recognizing and prioritizing the patient’s condition in a critical time.
- Δ Deficiency in checking the Medication Administration Record (*MAR*) and recent lab work, due to limited time and multiple tasks at hand.
- Δ Unestablished guidelines to standardize the process of assessing the patient’s status before transferring between the Intensive Care and procedure area.
- Δ Ineffective communication of critical results and STAT orders between the treating team (Physician-Nurse).



Recommendations:

- Δ Build a protocol to treat Hyperkalemia, including a confirmatory blood test if the initial ABG/VBG shows high Potassium.
- Δ Build protocol/guidelines to check medication orders and lab work before transferring patients outside ICU.
- Δ Implement the Just Culture principle.



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Mismanagement of Sepsis

Situation:



The patient was admitted as a case of Cholangitis and was treated in the Intensive Care Unit for Sepsis, Metabolic Acidosis, and Hyperkalemia. Unfortunately, the inadequate management of sepsis and high Potassium levels lead to the patient’s Cardiac Arrhythmia and death.



Background:

The 75-year-old patient presented to Emergency Department with a Gastrointestinal condition and then was shifted to the Intensive Care Unit, due to Hyperkalemia, Metabolic Acidosis, and Sepsis. Blood culture showed both *Gram-Negative Rods and Positive Cocci in the cluster*. The patient was initiated on Empirical Therapy. However, ineffective communication, escalation process, and the lack of rejection process lead to delays in verifying the order and modifying the antibiotic dose and failure in following the appropriate Sepsis Protocol.

Assessment:

A Root Cause Analysis was done, and multiple factors contributed to the event:

- △ Failure in recognizing and prioritizing the patient’s Sepsis condition in critical time, with an appropriate management plan.
- △ Ineffective communication and escalation process between Pharmacy and the treating physicians.
- △ Delay in antibiotic preparation, delivery, and administration.
- △ Unavailability of a standardized handover and order rejection process to follow-up on medication plans.

Recommendations:



- △ Build protocol/guidelines to check medication orders and lab work before transferring patients outside ICU.
- △ Reinforce immediate Sepsis Management Protocol with timely initiation of antibiotics.
- △ Build a pathway for Sepsis Management guidelines in ICIS.
- △ Streamline antibiotic verification, preparation, and escalation process.
- △ Adding 1st dose of *Meropenem and Vancomycin* to critical care areas Pyxis machines to be prepared by the privileged nursing staff.