# Nursing Management and Planning for the Patient with Acute Kidney Injury

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The 40-year-old female patient is an active smoker with a history of COPD, hypertension, morbid obesity, recent diagnosis of cervical/pelvic lymphadenopathy, and bone metastases to the left hip, complaining of sudden onset left flank pain, found to have a large left perinephric hematoma but no active hemorrhage. Status post urology evaluation in the Emergency Department, no acute GU intervention indicated, admitted for monitoring of hematoma and GYN-oncology nurse reevaluation. The patient lives alone, whose insurance does not cover cancer treatment, and she cannot receive treatment in New York. So, the patient plans to go to Florida, where the patient's parents live, and receive chemotherapy. While hospitalized in New York, she will receive treatment focusing on acute kidney injury, anemia, and pain management.

The patient has no known drug allergies but has allergies to chocolate, eggs, and nuts. The patient's vital signs: T: 97.5 °F, P: 75, R: 17, BP: 135/91, SpO2: 98%, Pain: 7-8/10 (worsening pain for cancer – back & left hip/ L4 & L5 region), Lung sounds clear bilaterally, Heart sound S1 & S2 presents, RRR, Bowel sounds: normoactive; had a bowel movement yesterday (03/09/23) Lower extremity: no pitting edema (slight swelling in both lower limbs; Reports no pain when touched or pressed), pulse 2+, capillary refill less than 3 seconds. The patient has an IV 20 G, access on the right forearm, and no infiltration/phlebitis to the IV site.

The goals of care planning for the patient with acute renal failure are to promote renal function, correct or eliminate reversible causes of renal failure, and provide supportive care. Specific interventions include monitoring and managing fluid and electrolyte imbalances, optimizing nutrition, and ensuring drug safety. AKI also adversely affects immune function and is widely regarded as an immunosuppressive condition (Gist & Faubel, 2020). A wealth of data has accumulated that clients with AKI have a significantly increased risk of subsequent infection

and sepsis (Gist & Faubel, 2020). Based on early data and the fact that sepsis is the leading cause of death in AKI clients, it is likely that AKI's systemic inflammatory response syndrome (SIRS) and anti-inflammatory response syndrome responses result in persistent or long-lasting conditions. Immune paralysis increases the risk of subsequent sepsis (Gist & Faubel, 2020).

Because of the high risk of infection, continue to evaluate the patient's skin integrity (Overbaugh, 2021). Moreover, monitor the patient's vital signs. Fever (>100.4°F) with increased pulse and respiration is typical of an increased metabolic rate due to an inflammatory process, although sepsis can occur without a febrile reaction (Overbaugh, 2021). Body temperature may be an excellent early indicator of kidney complications.

Furthermore, the patient will be monitored WBC count with differential. Her WBC count was 13.43 on 02/23, up to 20.69 on 03/09. Although elevated white blood cells may indicate a systemic infection, leukocytosis is common in ARF and may reflect damage within the kidneys. A shift to the left of the difference indicates an infection. Changes in the white blood cell count are known to be associated with the risk of long-term renal outcomes. Each leukocyte subtype is one immunological factor that plays a pivotal role in most organ damage processes. This role may apply to kidney damage problems (Han et al., 2014). I take culture and susceptibility samples from the patient and administer appropriate antibiotics to the patient as indicated. Confirmation of infection and identification of specific organisms help select the most effective treatment (Overbaugh, 2021).

AKI patients need emotional support from nurses and multidisciplinary team members. This is a challenging time for patients as well as their families. The patient's knowledge and understanding of AKI should be comprehensively assessed, and treatment progress and long-term prospects should be discussed. Families should be involved and allowed to explain the

various procedures and treatments to the patient. Problems arising from the patient's physical condition, such as the effect of uremia on concentration, fatigue, and nausea, should all be included in the treatment description. Open-ended questions and listening allow patients to discuss potentially tricky thoughts and feelings about this acute illness and open space to discuss concerns freely. Additional psychological support is needed (Murphy, F., & Byrne, G., 2010).

The patient's pain management includes non-pharmacological pain management and pharmacological pain management. Provide pharmacological pain management as directed, as the patient reports pain of 7-8/10 on a 0-10 pain scale on her back and left hip. Pain management using pharmacological methods includes using opioids (narcotics), nonopioids (NSAIDs), and adjuvant analgesics. In addition, systematic pain tracking, which is non-pharmacological pain management improves pain (Overbaugh, 2021). Self-report assessment tools such as pain diaries are easy to implement and be highly reliable, valid, and effective. A pain diary can increase self-control and facilitate communication with caregivers, allowing clients to monitor daily fluctuations in pain levels and the effectiveness of therapeutic interventions (Charoenpol et al., 2022).

Patient education encourages proper hand washing (Overbaugh, 2021). This reduces the risk of cross-contamination. One of the best precautions to protect yourself from infection risk is washing your hands properly and effectively. Healthcare workers with direct contact with clients are more likely to spread viruses and hospital infections. Therefore, knowing proper hand-washing techniques and following standard guidelines are paramount (Overbaugh, 2021). Another topic identified as requiring education in patient conversations was fluid restriction (Ellis, P., & Jenkins, K., 2014). The patient required strict I&O. Therefore, the patient should be reminded to include all fluids in her daily fluid calculations. The fluid should be considered a

drug and should be used with caution. Also, discuss activity limitations and gradual resumption of desired activities with the patient (Murphy, F., & Byrne, G., 2010). Encourage patients to use energy conservation, relaxation, and diversion techniques. It was identified that this patient needed measures to conserve energy and reduce boredom because he felt weak for a long time.

In conclusion, before going to Florida, where the patient has family and starts cancer treatment, the goals of treatment that the patient should focus on are promoting renal function, monitoring the white blood cell count to prevent infection, and providing emotional support and pain relief to the patient. The patient was also recommended proper hand washing to reduce cross-contamination and provided infection control education. Instructions given to the patient included fluid restriction, activity restriction, and gradual resumption of desired activities. Until the patient is transferred to another hospital, it is necessary to maintain the best condition to support the patient in starting cancer treatment and to accompany the treatment plan with the family.

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