Pak J Kidney Diseases

From the Desk of Editor in Chief

Dr. Rubina Naqvi

DOI: 10.53778/pjkd94333

Critical Care Units and Role of Nephrologists

Nephrologists play a crucial role in critical care units (ICUs) by managing patients with acute kidney injury (AKI), correcting electrolyte imbalances, and providing renal replacement therapies to these patients. Their expertise is essential for stabilizing patients with severe kidney-related problems, which can include managing complications like acute respiratory distress syndrome, guiding fluid management, and making complex decisions about dialysis in a high-stakes environment.

Ronco etal;[1] in 1998, brought forward the need for promoting the training of nephrologist in critical care management and the importance of collaborative management a nephrologist with critical care team and internist or any specialized primary care physician or surgeon. With passage of time and rapid growth of critical care medicine this message brings more and more attention towards these issues and role of nephrologist has much evolved.

One of the primary responsibilities of critical care nephrologists is the early detection and diagnosis of AKI and to lay down management plan at early stage so that progression of AKI can be halted. The implementation of biomarkers which can identify AKI even before rise in creatinine or decline in urine output is something where future is looking forward. There are many biomarkers described in literature,[2] where inflammation and ischemic changes can elevate levels of these biomarkers in very initial stage. We have studied some urinary biomarkers in population which was prone to develop AKI and have reported their efficacy.[3]

The provision of Renal Replacement Therapy (RRT), including hemodialysis, peritoneal dialysis, and continuous renal replacement therapy, is a cornerstone of critical care nephrology. RRT helps to maintain fluid and electrolyte balance, remove metabolic waste products, and regulate acid-base status in patients with severe AKI and/or other organ failure. Problems are faced by nephrologists who are working at places where whole spectrum of these facilities of RRT and trained staff are lacking, some centers even cannot offer peritoneal dialysis and many critically ill patients lost their life during arrangements or procedure of transportation to appropriate care center. Another big issue is affordability of management required in critical care, state driven

hospitals have limited budgets and facilities and private sector is out of reach for common person.
Thus sometimes even a trained nephrologist with reasonable know how of critical care management left with tied hands.

References:

1. Ronco C, Bellomo R. Critical care nephrology: the time has come. Nephrol Dial Transplant. 1998; 13(2):264–267.
2. Parikh CR, Coca SG. Are biomarkers in acute kidney injury ready for prime time? The time is right for a second look. Kidney International. 2024, 105: 675–8.
3. Naqvi R, Hossain N, Butt S, Bhellar Z, Fatima E, Imtiaz S, et al. Efficacy of multiple Biomarkers: NGAL, KIM1, Cystatin C and IL18 in predicting pregnancy related acute kidney injury. Pak J Med Sci. 2023;39(1):34-40. doi:https://doi.org/10.12669/pjms.39.1.6930