

Acute Kidney Injury in the Critically Ill: Herein Lies the Problem!

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Information is the resolution of uncertainty.

–Claude Shannon (“the Father of Information Theory”)

The ancients knew about the bean-shaped organs that lay in the abdomen but were not sure what their function was. The ancient Egyptians believed that the kidneys were advisors to the heart, which assisted the dead in the afterlife (Book of the Dead, 1550–50 BC).¹ There was a treatment for fluid retention (dropsy) in ancient Egyptian texts. Sushruta (600 BC) described in great detail the surgical removal of vesical stones.² There is no description of renal failure in any of the ancient texts. Our knowledge of uremia is relatively new, it was described for the first time in 1850s.³

Acute renal failure (ARF) is fairly common in the community and its incidence is rising.^{4,5} The presence of ARF results in poorer outcomes in hospitalized patients. Acute renal failure is now replaced with the term acute kidney injury (AKI), and it is now described using the kidney disease improving global outcomes (KDIGO) classification.⁶

Acute kidney injury in the critically ill patients is common in Indian intensive care units (ICUs) and leads to adverse outcomes in as many 38–90%. This issue deals with many areas related to AKI in ICU. Contrast-induced nephropathy, sometimes a gift of VOMITs (Victim Of Medical Imaging Technologies) to the patients, is a common problem. We are still uncertain about the preventive measures for this common problem. In preventive strategies for postoperative AKI, we may have some answers but not for the most important question: what should be the mean arterial pressure of the patients intraoperatively?

In the area of diagnosis of AKI, particularly in relation to biomarkers, we are far away from finding an ideal biomarker. We know what an ideal biomarker should do, but the search for it remains elusive. Even if we do find an ideal one, it is necessary to define when and how do we use that biomarker.

Apart from this, the issue has common topics of interests to the students and practitioners: dosing renal replacement therapy in AKI, anticoagulation in RRT, and drug dosing for patients with AKI and those on RRT. In this field, many areas still lack information, and the quest for resolving the uncertainties continues.

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