

Urinary Biochemistry is Used in the Diagnosis of Acute Kidney Injury

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Abstract

Acute kidney damage is a clinical illness that complicates and affects the course of a large number of hospitalized patients. Recent breakthroughs in clinical and basic research will aid in the characterization of this condition and the understanding of its pathophysiology. With this information, we will be able to perform more reliable epidemiologic studies in order to acquire a better understanding of the syndrome's impact. AKI is a condition with no single and distinct pathogenesis. Despite evidence that questions the use of biochemical indicators in clinical practise, they continue to be used. A better marker would include more particular information about the type, severity, and location

Renal I ra q nd: Renal ultrasonography is effective for evaluating existing structural renal illness and identifying urine collecting system blockage. Reduced corticomedullary differentiation and decreased kidney size, in particular, are indicators of underlying CKD. In patients with abdominal distension, ultrasonography might be technically demanding, necessitating the use of alternative imaging investigations [11].

Renal Doppler ultrasonography and contrast-enhanced ultrasound are two relatively new techniques for estimating renal perfusion and renal cortical microcirculation at the bedside, respectively. Although the non-invasiveness, reproducibility, and accessibility of these approaches sound promising, their widespread clinical application is still hampered by training requirements as well as confusion about how to interpret the data obtained. Finally, while Doppler scans can detect the existence of decreased renal blood flow, they are ineffective in determining the cause of AKI [12].

Renal biop : Renal biopsies are infrequently conducted in critically ill patients, owing to the perceived risk of bleeding problems and the lack of therapeutic implications. A renal biopsy, on the other hand, may provide information not available through other procedures and should be considered if underlying parenchymal or glomerular renal illness is suspected. Interestingly, it was shown that diffuse histological alterations of AKI could exist in the absence of a significant decrease in serum creatinine. Only 198 patients satisfied the KDIGO creatinine or urine criteria for AKI among 303 patients with biopsy-proven acute parenchymal renal abnormalities, including crescentic glomerulonephritis and acute thrombotic microangiopathy. In a second French study, over 50% of AKI patients who underwent renal biopsy had a diagnosis other than acute tubular necrosis, which frequently led to a change in treatment plan. According to recent research, Tran's jugular renal biopsies may be safer than percutaneous or open procedures [13, 14].

Discussion

Findings of this study are expected to provide recommendations for the best course of action to address the weaknesses of present biochemistry and genetics teaching techniques, as well as to better inform medical educators and health policymakers about these deficiencies. It was notable that more than half of the practitioners were aware of current advancements in biochemistry and genetics and how these have impacted modern medicine. Pharmacogenetics, whole genome association studies, and personalised medicine were all topics that doctors were familiar with. Our findings also show that most medical professionals recognise the importance of biochemistry and genetics in modern clinical practice, such as disease diagnosis and focused treatment. Despite the generally favourable outlook, medical personnel were hesitant to hire a clinical biochemist to assist with diagnosis and/or monitor the development of the disease. The low percentage of Jordanians with professional board certification in clinical biochemistry, as well as the lack of national clinical biochemistry board certification programmes and fellowships, could explain this. As a result, clinical biochemists are not commonly found on the medical teams of Jordanian doctors [15, 16].

In any case, given how quickly these fields are developing and

