Prognosticating Acute Kidney Injury (AKI) in Liver cirrhosis: A prospective study

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Background and Aim
Renal failure is a common complication in patients with chronic liver disease. The development of Acute Kidney Injury (AKI) in patients with cirrhosis has significant prognostic importance. Stages of AKI determine the prognosis and mortality in chronic liver disease. Aim is to determine the risk factors, clinical profile and treatment response in cirrhotic patients with AKI.

Materials and Methods
Study included 130 patients with liver cirrhosis diagnosed clinically, biochemically and confirmed with imaging (USG abdomen or CT abdomen). Patient profile was noted and followed up in subsequent admissions. AKI criteria were charted based on creatinine or urine output and was recognised. Criteria based staging done into AKI stage 1,2 and 3 and treatment given with albumin alone or with albumin + terlipressin. Response to treatment noted and prognostication done.

Results
Among 130 patients with cirrhosis, 117 were males (90%); mean age was 50.43 ±10.2 years. The overall prevalence of AKI in the study was 27.7%. Complications like hepatic encephalopathy (0.020), spontaneous bacterial peritonitis (0.02), sepsis (<0.001) and shock (0.002) were significant in those with AKI and were statistically significant. Patients with stage 3 AKI were significantly older than those belonging to Stage 1 and 2 (0.043). Mortality was significantly high in those with AKI compared with no AKI (<0.001). More patients in Stage 3 required terlipressin infusion along with albumin therapy (0.0409) with a lower AKI recovery (0.008) and a high mortality (0.001).

Conclusion:
Stage 3 AKI had decreased responsiveness to terlipressin with a poor prognosis and increased mortality.

REFERENCES

Parameter | AKI n=36(%) | No AKI n=94 (%) | P value
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Patient Outcome | Alive | 27 (75.0) | 91 (96.8) | <0.001
 | Dead | 9 (25.0) | 3 (3.2) |