

Results show benefits in using acute kidney injury criteria in the diagnosis of cirrhosis

31 March 2011

The first clinical study investigating the use of the AKIN criteria (Acute Kidney Injury Network) in cirrhosis has shown significant benefits that have the potential to change future diagnosis, according to results from a Spanish study presented today at the International Liver Congress.

As screening and differential diagnosis is becoming increasingly important in relation to managing health service provision, if these results are confirmed in larger studies, the AKIN criteria has the potential to replace current screening and diagnosis criteria in hospitalised cirrhotic patients.

This prospective study aimed to assess the value of the AKIN criteria in predicting outcomes in hospitalised cirrhotic patients. Out of 300 patients admitted to hospital for complications of [cirrhosis](#) 88 (29%) developed [renal failure](#) according to the AKIN criteria. Three-month survival of these patients was 38%, compared with 87% of patients who did not develop renal failure (p

Renal failure in cirrhosis is currently defined as serum creatinine greater than 1.5 mg/dL. According to the study investigators this definition has two shortcomings: firstly it represents a very low glomerular filtration rate (GFR), and secondly it may not detect significant changes in GFR because it does not take into account variations in creatinine values. In contrast, the AKIN criteria is much more sensitive and considers renal failure as an increase in serum creatinine greater than or equal to a 0.3ml/dL (?50% increase) compared to baseline within 48 hours.

Mark Thursz, EASL's Vice-Secretary commented: "Liver disease is associated with a high mortality due to renal failure, especially in end stage cirrhosis. As experts and clinicians in the field of hepatology, defining more sensitive tests that help to identify patients at risk of renal failure or death earlier is critical to enable us to intervene and ensure the patient has the best possible outcome".

Furthermore, when the AKIN criteria were combined with the current definition of renal failure, patients meeting the AKIN criteria in whom serum creatinine reached a peak value of >1.5 mg/dL (n=60) had a significantly lower survival compared to patients with a peak value \leq 1.5 mg/dL (n=28) (29% vs 58%, respectively; p=0.026). Out of the 300 patients, 30 patients had [serum creatinine](#) >1.5 mg/dL but did not meet the AKIN criteria. However, three-month survival of these patients was 80%.

More information: Fagundes C et al. Acute Kidney Injury Network (AKIN) Criteria for Acute Renal Failure Predicts Outcome in Hospitalized Cirrhotic Patients. A Prospective Study. Presented at The International Liver Congress 2011

Provided by European Association for the Study of the Liver

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