RATIONALE AND AIMS OF THE AASLD-IAC JOINT MEETING

BIOMARKER DISCOVERY FOR RENAL DYSFUNCTION IN CIRRHOSIS

Renal complications are common in cirrhosis, especially in patients with refractory ascites, and they can negatively impact the patients' survival. The International Ascites Club has set out clear diagnostic criteria for both acute and chronic forms of HRS. Nevertheless, IAC has not delineated guidelines for the diagnosis of other forms of renal impairment in cirrhosis, be they acute or chronic. Well-accepted definitions and staging systems for chronic kidney disease (CKD) and acute kidney disease (AKI) exist but they have been not applied up to now in patients with chronic liver disease. In addition either IAC criteria as well as the more recent definitions of CKD and AKI are based on serum creatinine. Serum creatinine is notoriously inaccurate in the diagnosis of renal dysfunction in cirrhosis. Patients with cirrhosis often have low serum creatinine levels, due to reduced production of creatinine from creatine in the liver and significant muscle wasting. Thus, serum creatinine in patients with cirrhosis can still be within the normal range despite significant renal dysfunction. The use of creatinine clearance in cirrhosis to assess renal function is also unreliable because of the falsely low serum creatinine in these patients, coupled with a relatively increased renal tubular creatinine secretion compared to filtered creatinine. Formulae such as the Cockcroft–Gault and Modification of Diet in Renal Disease (MDRD), which are based on the serum creatinine concentrations, will also overestimate the GFR in patients with cirrhosis. Thus, other biological markers should be introduced and validated in patients with advanced liver disease. Working together, nephrologists, hepatologists, intensivists can discover and propose novel biomarkers taking into account the complexity of the pathophysiology of renal dysfunction in patients with chronic liver disease. Although there is considerable evidence that renal failure in patients with cirrhosis is primarily related to disturbances in circulatory function, several other factors can be involved such as etiologic factors underlying the liver disease, bacterial infections, cholestasis, NSAIDs or other drugs, co-morbidities. As a consequence the spectrum of renal histopathological changes in cirrhosis is extensive and individuals may have coincident glomerular and tubulointerstitial, acute and chronic lesions. The mulitidisciplinary approach to renal dysfunction in cirrhosis, on which the workshop is focused, let it possible to discuss in depth this topic. The proposed speakers, either hepatologists or nephrologists, are well known experts of renal dysfunction in cirrhosis.

Paolo Angeli, M.D.