Oral Presentations

Topic 1: Acute on Chronic Liver Failure

No: 2076

AKI persistence at 48 h predicts mortality in patients with acute on chronic liver failure provided the peak creatinine is above 1.14 mg dl

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Background and aim: Diagnosis and management of renal dysfunction in cirrhosis has changed with advent of AKI criteria. We evaluated the impact of AKI persistence at 48 h on in-hospital mortality in a cohort of ACLF patients (APASL definition).

Methods: Consecutive patients of ACLF (n = 374) were included.

Results: AKI at admission was present in 167 (44.8%) patients. At 48 h, 77.2% patients had persistent AKI, 22.8% had transient AKI and 9% developed new onset AKI. High MELD (p, OR, 95% CI) (≥33) (<0.01, 8.3, 3.5–19.4), SIRS (0.03, 2.65, 1.1–6.3) and age (≥42 years) (0.03, 2.4, 1.06–5.69) were significant predictors of AKI persistence. Persistent AKI was associated with higher in-hospital mortality (P = 0.04, HR 1.8, 95% CI 1.4–2.4) as compared to conventional criteria using cut-off serum creatinine ≥1.5 mg/dl (0.04, HR 1.3, 95% CI 1.01–1.8). A lower cut-off for serum creatinine of 1.14 mg/dl at 48 h had a sensitivity of 100% and specificity of 75.6% against the conventional 1.5 mg/dl cut-off. The new cut-off predicted mortality with higher odds (OR 2.4, 95% CI 1.3–4.8) as compared to the conventional cutoff (OR 2.1, 95% CI 1.1–4.1). Further, a smaller fold change of 26% from baseline at 48 h was associated with increased mortality (P = 0.02, OR 3.3, 95% CI 1.1–9.7) in these patients.

Conclusion: AKI persistence at 48 h predicts mortality better than serum creatinine of 1.5 mg/dl in patients with ACLF. Lower threshold as well as smaller increases in serum creatinine should therefore be considered for risk stratifying patients of ACLF for additional pharmacotherapy.

Topic 1: Acute on Chronic Liver Failure

No: 1683

Title does the different etiological profiles affect the outcome of acute on chronic liver failure in pediatric population

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Aim: To compare the prevalence and outcome of acute-on-chronic liver failure (ACLF) in children with chronic liver disease (CLD) due to various etiologies.

Methods: All children between the ages of 3 months to 18 years presenting with chronic liver disease from Dec’2010 to Sept’2014 were included. ACLF was defined as per APASL criteria. Survival was observed within 12 weeks of development of ACLF.

Results: Out of the total 403 cases of childhood CLD, 27 (6.7%) were diagnosed as ACLF with the median age of 9 years (1.5–17 years). Median bilirubin and INR were 17.5 mg/dl and 3.3 respectively. Commonest underlying etiology of CLD were Wilson’s disease 14 (52%), autoimmune hepatitis (AIH) 8 (29.7%), and cryptogenic 3 (11.1%). None of the cases with metabolic liver disease (n = 92) or chronic hepatitis B (n = 100) had ACLF. The common acute events were viral insult 6 (22.2%), drugs 4 (14.8%). Flare of the underlying condition was seen in 8 Wilson’s disease and 6 AIH patients. Median PELD/MELD, CLIF-SOFA and APACHE-II scores were 27 (12–54), 9 (8–18) and 9 (0–30). of the 27 children, 10 (37%) expired within 12 weeks and 2 were transplanted. Mortality was 57% among Wilson’s disease and 12.5% in AIH (P = NS).

Conclusion: ACLF is common in children with Wilson’s disease and AIH and the mortality is higher in those with Wilson’s disease.
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No: 1008

Establishment and validation of alph Q score to predict mortality risk in patients with acute on chronic hepatitis B liver failure

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Aim: There are no strong and powerful models in predicting the outcome of acute-on-chronic hepatitis B liver failure (ACHBLF). Here, we aimed to establish and validate a new prognostic score, named ALPH-Q, which integrates electrocardiography parameters, to predict short-term mortality of patients with ACHBLF.

Method: 214 patients were included in this study. ALPH-Q score was constructed by Cox’s proportional hazards regression analysis and was validated in an independent cohort. The area under the receiver operating characteristic curve was used to compare the performance of different models, including ALPH-Q, Child-Pugh score (CPS), model of end-stage liver disease (MELD) and a previously reported logistic regression model (LRM).

Result: ALPH-Q score was constructed with five independent risk factors, including age (HR = 1.034, 95% CI 1.007–1.061), liver cirrhosis (HR = 2.753, 95% CI 1.366–5.548), prothrombin time (HR = 1.031, 95% CI 1.002–1.062), hepatic encephalopathy (HR = 2.703, 95% CI 1.630–4.480) and QTc (HR = 1.008, 95% CI 1.001–1.016). The performance of ALPH-Q score was significantly better than that of MELD and CPS in both training (0.896 vs. 0.712, 0.896 vs. 0.738, respectively, both P < 0.05) and validation cohorts (0.837 vs. 0.689, 0.837 vs. 0.585, respectively, both P < 0.05). Compared with LRM, ALPH-Q also showed a better performance (0.896 vs. 0.825, 0.837 vs. 0.818, respectively).

Conclusion: We have developed a novel ALPH-Q score with greater performance than CPS, MELD and LRM for predicting short-term mortality of patients with ACHBLF.

Topic 1: Acute on Chronic Liver Failure

No: 1252

Acute hepatitis A or E can trigger the development of acute on chronic liver failure (AOCFLF) in sapporo Japan

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Background and aims: Even in non-endemic areas including Japan, autochthonous infection of hepatitis A virus (AHV) or E (HEV) causes sporadic disease, however, their clinical impact for AoCLF is obscure. The aim of this study is to clarify whether acute AHV or HEV could trigger for AoCLF in industrialized countries.

Methods: The patients with acute hepatitis (AH) A, B or E diagnosed from 1998 until 2013 in single institute in Sapporo were enrolled. The incidences of acute liver failure (ALF), AoCLF and underlying liver disease were evaluated. Definition of ALF was prothrombin time (PT) INR ≥1.5, and that of alcoholic liver disease (ALD) was ethanol intake ≥80 g/day over 5 years. The APASL criteria for AoCLF were adopted.

Results: A total of 126 patients, 27 with AHA (16 male, median age 44 years), 54 with AHB (37 male, 33 years) and 45 with AHE (35 male, 51 years) were assigned. They were older in the order of HEV, HAV and HBV (< 0.03). Underlying liver diseases including ALD, fatty liver, HBV carrier etc. existed in 10 (37.0 %) patients in AHA, 5 (9.3 %) in AHB and 16 (35.6 %) in AHE, respectively. Ten patients in AHA, 21 in AHB and 20 in AHE developed ALF, and, among them, 5 AHA (18.5 %), no AHB, 7 AHE (15.6 %) patients presented AoCLF, respectively (HAV or HEV vs. HBV, P < 0.003). Body weight in AHA and alcohol intake in AHE was related with AcCLF (P = 0.0904, 0.0009), respectively. Four AHB and 2 AHE patients were deceased or underwent liver transplantation.

Conclusions: Acute HAV or HEV.

Topic 1: Acute on Chronic Liver Failure

No: 1414

An analysis of risk factors of secondary infection of patients with HBV related acute on chronic liver failure and its impact on prognosis

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Aims: The aim of this study is to evaluate its impact on clinical outcome and identify the potential risk factors for its development in these patients.

Methods: In this retrospective and case controlled analysis, ninety eight patients with HBV-ACLF were enrolled and divided into two groups (infected 48 and non-infected n = 50). Clinical features and biochemical markers of these patients were collected. Univariate analysis was performed by Chi square test using SPSS19.0 software.

Results: Sites infections were occurred: abdominal infections (including spontaneous bacterial peritonitis) 13 cases (27.08 %), respiratory infections 10 cases (20.83 %), blood-borne infection 3 cases (6.25 %), biliary tract infection 2 cases (4.17 %), urinary tract infection 1 case (2.08 %), skin infections 1 case (2.08 %), location 8 cases (6.25 %), more than two and two parts of the infection 10 cases (20.8 %). Patients survival in infected group were 25 %, significantly lower than that in non-infected group (96 %, P < 0.001). Univariate analyses indicated that risk factors for secondary infection include age > 45 years (P = 0.046), ascites (P = 0.003), hepatic encephalopathy (P < 0.001), hepatorenal syndrome (P < 0.001), serum total bilirubin ≥ 400 µmol/L (P = 0.029), serum alanine aminotransferase > 410 U/L (P = 0.029), serum total protein < 62 g/L (P = 0.027), serum globulin < 25 g/L (P = 0.01), platelet count > 100 x 109/L (P = 0.026).