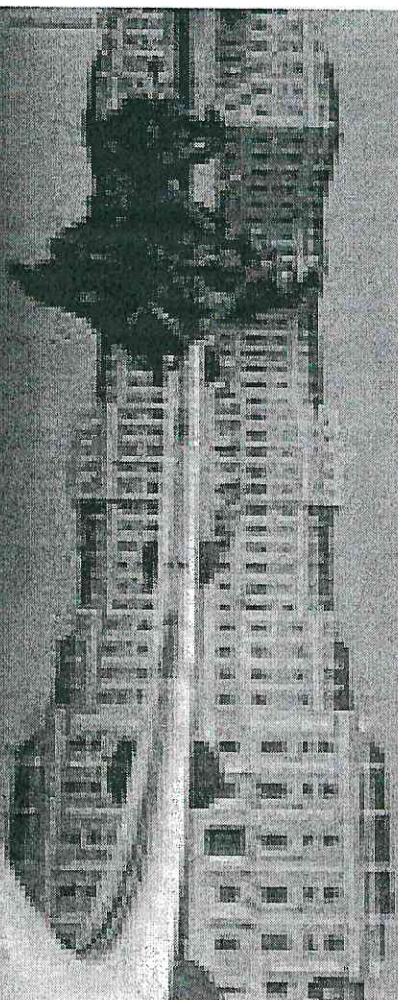




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PRELIMINARY PROGRAMME
AND CALL FOR ABSTRACTS



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Liver: Cirrhosis and complications

Wednesday Oct 22nd, 2008 - 12:15 - 13:45
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EFFECTS OF ALBUMIN DIALYSIS (MARS) AND THERAPEUTIC APHERESIS ON BILIRUBIN REDUCTION AND KIDNEY FUNCTION IN PATIENTS WITH ACUTE ON CHRONIC LIVER FAILURE. A CASE-CONTROL STUDY

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Topics: 6.6 Cirrhosis and complications: clinical aspects

INTRODUCTION: During the last decades artificial liver support systems have been developed. In particular, Albumin Dialysis (MARS, Molecular Adsorbent Recirculating System), FPSA (Fractionated Plasma Separation and Adsorption) and Plasma Exchange (PE) seems to be able to remove molecules involved in the pathophysiology of liver failure. MARS and PE are available in our Centre; the indications and efficacy of these techniques are not completely clear.

AIMS & METHODS: We retrospectively analyzed data from 12 patients (6 PE, 6 MARS) affected by Acute on Chronic Liver Failure (AoCLF), matchable for age and Model for End-Liver Disease (MELD) score [1], without hepatic encephalopathy (HE), treated with a cycle of 3 consecutive sessions, to evaluate differences in total bilirubin (tBil, mg/dL), conjugated bilirubin (cBil, mg/dL), serum creatinine (sCr, mg/dL), blood urea nitrogen (BUN, mg/dL). Patients were also categorized into classes of kidney damage according to Kidney-Disease Outcome Quality Initiative (K-DOQI) guidelines [2].

RESULTS: The two groups showed the following characteristics: PE age 54.8 ± 12.9 years, males 5/6 (83.3%), MELD score 27.8 ± 7.6 , tBil 36.3 ± 14.2 , cBil 31.0 ± 8.1 , sCr 1.5 ± 0.9 , BUN 31.3 ± 30.8 ; 1 patient was in K-DOQI class I, 3 in class II, 2 in class IV. MARS age 55.0 ± 11.3 years, males 2/6 (33.3%), MELD score 27.7 ± 6.5 , tBil 35.5 ± 8.6 , cBil 24.8 ± 7.4 , sCr 1.9 ± 1.3 , BUN 51.3 ± 26.8 ; 1 patient was in K-DOQI class I, 1 patient in class II, 1 patient in class III, 2 patients in class IV, 1 patient in class V. The two groups were statistically homogeneous for baseline values. Analysis of percent variation of the parameters in the single treatments showed a significantly higher reduction in MARS compared with PE for sCr ($-25.5 \pm 8.0\%$ vs $2.2 \pm 6.4\%$, $P < 0.001$) and BUN (-28.5 ± 5.9 vs $10.0 \pm 20.7\%$, $P = 0.002$). No differences were observed for tBil and cBil. The same analysis in the cycle showed a significantly higher reduction in PE compared with MARS for tBil ($-55.0 \pm 28.5\%$ vs $-18.1 \pm 23.0\%$, $P = 0.041$) and cBil ($-73.9 \pm 5.0\%$ vs $-30.8 \pm 11.6\%$, $P = 0.003$). This finding was significant after adjustment for respective baseline values, age, MELD score, number of treatments in multivariate analysis. Differences in other variables did not reach statistical significance.

CONCLUSION: In patients with AoCLF without HE, PE was more effective than MARS in reducing tBil and cBil; MARS however, was associated with a greater removal of nitrogenous waste products during a single treatment.

REFERENCE(S): 1. Malinchoc M et al. Hepatology 2000;31:864-712. Levey AS et al. Ann Intern Med 1999;130:461-70

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