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volunteers (HV) served as a reference group. The LPO and AOS were evaluated in all patients before and after 6 month of treatment by EPL or placebo.

Plasma malondialdehyde (MDA-µmol/L) was assayed by spectrophotometric method modified by Carbonneau. Organic peroxides (ROOH-µmol/L) were estimated spectrophotometrically using Sigma-F-3754, M-3641 and X-0127 reagents. Activity of AOS in erythrocytes (U/gHb): superoxide dismutase (SOD) and glutathione peroxidase (GPx) were measured spectrophotometrically using Oxis Bioxytech SOD-525 and Bioxytech GPx -340 tests.

The pre-treatment plasma levels of MDA (4,6±1,2) and ROOH (1,7±0,4) in HD pts were increased (p<0,001) in comparison with HV (1,6±0,5; 1,1±0,3 respectively). SOD(596,2±105,8) and GPX (50,9±10,0) activities were lower (p<0,001) than in HV (817,3±96,4 and 76,9±17,5 respectively). After 6 months of EPL therapy the MDA(3,5±0,4) and ROOH(1,1±0,5) levels decreased (p<0,001). In placebo group MDA(4,5±1,3) did not change significantly, ROOH(1,9±0,4) levels increased (p<0,05). At the end of study the MDA and ROOH levels were lower (p<0,05 and p<0,001 respectively) in EPL if compared with placebo pts. In EPL group the activities of SOD(730,3±77,0) and GPx (77,4±9,5 increased (p<0,001) but in the placebo group: SOD (550,5±151,2) and GPx (42,4±9,5) decreased (p<0,001) during study.

In conclusion EPL seem to be effective for reducing disturbances of LPO and AOS in HD pts.

SA-P0874

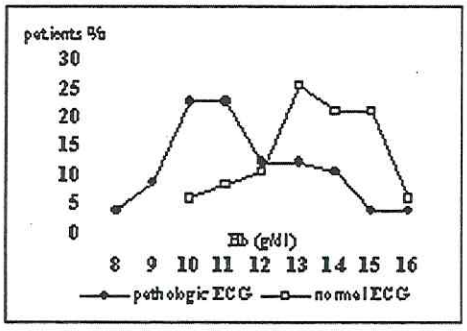
Correlation between Anaemia and Cardiopathy in Uremic Patients. Giorgio Splendiani, Antonio Sturniolo, Stefano Costanzi, Stefano Passalacqua, Pierluigi Fulignati, Tiziana Tullio, Emiliano Staffolani. *Dept of Nephrology, Tor Vergata University, Rome, Italy.*

The majority of chronic uremic patients shows anaemia in predialytic phase. Aim of this work retrospective, was to study the correlation between anaemia and cardiovascular pathology in chronic uremic patient in conservative therapy. During the period from 1/1/2000 to 10/30/2001 we observed 291 uremic patients (158 m, 155 f, mean age 47.6±16.9) in conservative therapy.

We are classified anaemia according to guide lines of SIN (Italian Society of Nephrology): fertile female Haemoglobin (Hb) <11 g/dl; menopause female and adult male Hb< 12 g/dl.

Statistical study was performed with linear regression test. In the whole of patients 181(62.3%) of these was clear to have a normal cardiovascular condition, while in the rest of patients 110 (37%) was showed that: 38% had cardiac frequency alteration and 17.8% cardiac hypertrophia. The people curve in relation with Hb, shows significant peak different between cardiopathic (Hb 10-12) and non-cardiopathic (Hb 13-15) patients. Statistic study showed the following correlation: anaemia vs ECG alteration p<.001, anaemia vs frequency abnormality p<.001, anaemia vs rhythm irregularity p<.001, anaemia vs hypertension N.S..

In uremic patient the precocious treatment of the anaemia can help in prevention of cardiovascular disease.



SA-P0875

Benefit of Continuous Dialysis in Subgroups of Acutely Ill Patients: A Retrospective Analysis. Azim Gangji, Christian G. Rabbat, Peter J. Margetts. *Division of Nephrology, McMaster University, Hamilton, Ontario, Canada.*

The occurrence of acute renal failure in the intensive care setting is a poor prognostic factor. ICU patients with acute renal failure are a heterogenous population and we hypothesize that subgroups of these patients would benefit from continuous dialysis therapy. From a comprehensive tertiary care ICU database, we identified patients with acute renal failure exposed to continuous or intermittent dialysis. We a priori identified subgroups including patients with systemic inflammatory response syndrome, severe sepsis, hemodynamic instability, or liver disease, and compared the ICU survival in these subgroups by dialysis modality. We identified 79 intermittent dialysis patients and 36 continuous dialysis patients. Nephrologists preferentially selected patients with greater illness severity and patients with severe sepsis for treatment with continuous dialysis. Overall, there was no significant difference in survival between intermittent and continuous dialysis. There was a significant improvement in survival in patients with systemic inflammation (p=0.04) or severe sepsis (p=0.05) when treated with continuous dialysis. There was also a trend to increased benefit of continuous dialysis in patients with greater illness severity based on APACHE II score. Patients with lower APACHE II score, those with hemodynamic instability, and those with liver disease, did not appear to benefit from continuous dialysis therapy. Among the survivors continuous dialysis did not appear to hasten the return of renal function. This retrospective study suggests that continuous dialysis may be beneficial in a subgroup of ICU patients with more severe illness and in patients with sepsis. This population should be identified and prescribed continuous dialysis therapy if available and further randomized trials of dialysis modality should concentrate on this population.

SA-P0876

A Trial of Insulin-Like Growth Factor (IgF-1) in Delayed Transplant Allograft Function: A Model To Study Postischemic Acute Renal Failure (ARF) in Humans. Michelle A. Hladunewich, Geraldine C. Derby, Geraldine Corrigan, Deepa Ramaswamy, Anthony Thrall, John D. Scandling, Bryan D. Myers. *Division of Nephrology, Stanford University, Stanford, CA.*

IGF-1 has been shown in animal models to promote and accelerate recovery from ARF. Nevertheless, a therapeutic trial of IGF-1 in patients with ARF in an ICU setting failed to demonstrate efficacy (Kidney Int 55:2423,1999). However such patients often had multiple organ failure, recurrent renal injury and a delay of several days before commencing treatment. To circumvent these confounding factors, we randomized 45 recipients of cadaveric renal allografts to immediate IGF-1 versus placebo therapy (100 mg/kg SC b.i.d. for 6 days). To ensure protracted ARF, only those with a creatinine clearance < 20 ml/min, 3 hours post-transplant were selected. The two arms were matched for donor age and ischemic times. Creatinine clearance prior to commencing treatment was not significantly different between the two groups (9±5 ml/min - IGF-1 and 8±6 ml/min - placebo). Inulin clearance on day 7, the primary outcome measure, was 20±22 and 19±19 in the IGF-1 and placebo groups, respectively (p=NS). Secondary outcome measures including nadir serum creatinine after one month and need for dialysis also did not differ between the two groups. Retrospectively, we examined the placebo arm of the trial and determined by discriminative analysis that < 20 ml/min of creatinine clearance is a reasonable predictor of protracted ARF. As tubular damage abolishes creatinine secretion, a creatinine clearance allows for rapid identification of potential study patients. Defining a 2-fold increase above placebo on day 7 GFR as of meaningful biological significance, we determined that only a modest sample size is necessary. Thus, we conclude that (i) IGF-1 treatment is unlikely to benefit ARF and (ii) the transplanted kidney is the best model to study new agents for ARF that have demonstrated promise in animal trials.

SA-P0877

Effect of Renal Cell Therapy on the Gene Expression Profiles of Inflammation in Patients with Acute Renal Failure (ARF) and Multiorgan Failure (MOF). H.D. Humes,[1,2] William F. Weitzel,[1] Fresca C. Swaniker,[3] Robert H. Bartlett.[3] *[1]Internal Medicine, University of Michigan, Ann Arbor, MI; [2]Nephros Therapeutics, Inc., Ann Arbor, MI; [3]Surgery, University of Michigan, Ann Arbor, MI.*

Cell therapy provides dynamic, individualized therapy to patients suffering from complex medical disorders. The development of a bioartificial kidney (BK) consisting of a synthetic hemofilter in series with a renal tubule assist device (RAD) containing 10^9 human renal tubule cells provides an opportunity to assess the influence of RAD treatment on the inflammatory status of ICU patients with acute renal failure (ARF) and multiorgan failure (MOF). In an FDA-approved Phase I/II clinical trial, mRNA was isolated from the patients' white blood cells (WBC) at various times before, during, and after RAD therapy. Changes in WBC gene expression were analyzed by oligonucleotide DNA microarray (chip) technology utilizing Affymetrix chips containing over 14,000 sequences. Three patients with ARF, MOF, and sepsis have been evaluated. Compared to gene expression profiles in 4 normal controls, the patients' baseline profile prior to RAD treatment but while receiving continuous venovenous hemofiltration (CVVH) for 2 to 4 days demonstrated 582-870 genes with 221 common to all 3 patients, 156-308 with 60 common, and 48-84 with 14 common expression profiles with 3x, 5x, and 10x changes compared to controls. RAD therapy resulted in 167, 169, and 480 genes changing 3x compared to pretreatment levels in these 3 patients. Of note, one patient who suffered an acute event, most likely a pulmonary embolism, demonstrated a rapid 3x change in over 1900 genes within a 2-hr period following the event. Hierarchical cluster analysis of the gene expression profiles demonstrates dynamic changes in multiple gene groups, including cytokines, immunoglobulins, toll receptors, adhesion molecules, growth factors, antimicrobial peptides, proteases, transporters, transcription factors, and kinases. Bioinformatic analysis will be applied to identify correlations to acute physiologic parameters, plasma cytokine levels, and WBC gene expression profiles to provide diagnostic, prognostic, and mechanistic relationships for this complex medical disorder.

Nephros Therapeutics, Inc.

SA-P0878

Features and Predictors of Rhabdomyolysis Induced Renal Failure in Combined Heroin and Cocaine Users. Janice Lin, Michal L. Melamed, Joseph A. Eustace, Derek M. Fine. *Medicine, Johns Hopkins University, Baltimore, MD.*

Illicit drug induced rhabdomyolysis is a well-known but under studied cause of acute renal failure.

We examined features and admisson predictors of renal failure in patients admitted to a single center over a 5 year period with a creatine kinase (CK) peak >5,000 IU/L and