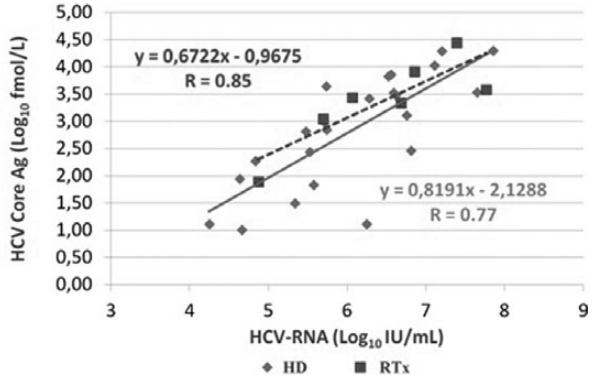

MP546

MP546 DIAGNOSIS AND FOLLOW–UP OF HCV INFECTION IN HEMODIALYSIS PATIENTS AND RENAL TRANSPLANT RECIPIENTS: HCV CORE ANTIGEN AND IGM ANTI–HCV.

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Introduction and Aims: Hepatitis C Virus (HCV) infection has a great impact on the prognosis of patients affected by end-stage renal disease. The prevalence of HCV infection in hemodialysis (HD) patients is still significantly higher than the one observed in general population. In this group, the infection bears a strong effect on both mortality and morbidity. Similar considerations can be made for renal transplant (RTx) recipients: in addition to an increased mortality risk due to progressive liver damage, cardiovascular disease, infections and neoplasms, HCV infection is a negative prognostic marker of graft function and survival. Indeed, infected RTx patients have a higher relative risk for post-transplant glomerulonephritis and chronic allograft nephropathy.To date, laboratory confirmation of HCV infection is based on two different principles: immuno-enzymatic assays (EIA), which can be considered as a screening test that identifies anti-HCV antibodies in the patients serum, and molecular biology techniques, based on viral RNA quantification, which are employed as confirmatory and follow-up assays. The latter methods are considered as the gold standard due to their high accuracy, but they are burdened by some negative aspects, such as the high cost, the elevated turnaround time, and the need for dedicated personnel and spaces.
Methods: The primary aim of the study was to determine the accuracy of two EIA for the quantification of HCV core antigen (HCVAg ARCHITECT®) and IgM anti-HCV (DIA.PRO HCV IgM), employed as a confirmatory test in two cohorts of HCV-positive patients (HD and RTx). We analyzed 32 serum samples from HD patients (Group A) from three different hemodialysis facilities, and 11 samples from RTx recipients (Group B). We compared the obtained results with a standardized molecular biology method, a real-time PCR (COBAS® TaqMan® HCV Test, v2.0).
Results: The HCVAg ARCHITECT® immunoassay, used as a confirmatory test for the infection, showed a perfect sensitivity (100%) in both of the two groups of patients, while the specificity was estimated to be 87.5% and 66.7% in Group A and Group B respectively. The DIA.PRO HCV IgM immunoassay showed a lower concordance with the viremia, with a sensitivity of 100% and 85.7%, and a specificity of 75% and 50% in the two groups respectively [Table 1]. Owing to the high sensitivity of both assays in Group A, we considered as positive only the samples which tested reactive for both tests: in HD patients the accuracy of this combined test reached 100%. We also found a strong correlation of the HCV core antigen and the HCV-RNA levels in both Group A (R = 0.77) and Group B (R = 0.85) [Figure 1].
Conclusions: Both of the assays showed a good accuracy as confirmatory tests for HCV infection. In particular, HCVAg ARCHITECT® proved to be a reliable marker of viral replication, with an extremely good correlation with the viremia in both of the studied cohorts. Therefore, these assays could be a useful complementary tool to the gold-standard diagnostics for HCV infection.

MP547 FATIGUE IS ASSOCIATED WITH SERUM INTERLEUKIN-6 LEVELS AND SYMPTOMS OF DEPRESSION IN PATIENTS ON CHRONIC HEMODIALYSIS

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Introduction and Aims: Recently, we have shown that depression, anxiety, number and severity of comorbidities and IL-6 levels were significantly correlated with fatigue and that the presence of both anorexia and fatigue in chronic HD patients was associated with significantly higher levels of plasma IL-6 in end-stage renal disease patients receiving chronic hemodialysis.The present study aimed at evaluating in a larger population of chronic HD patients the possible correlation between fatigue and markers of inflammation such as serum levels of Interleukin-6 (IL-6) and C-reactive protein (CRP).
Methods: All prevalent patients affected by end-stage renal failure who received chronic hemodialysis at the Hemodialysis Unit of the Università Cattolica del Sacro Cuore of Rome, Italy between January 2009 and July 2013, were eligible for inclusion in the study. The following demographic, clinical, and laboratory data were recorded for each patient at the moment of the inclusion in the study: age, gender, underlying renal disease, hemodialysis regimen,duration on dialysis, type and number of comorbidities, symptom of depression and anxiety (through the Beck Depression Inventory and the Hamilton Anxiety Rating Scale), cognitive function (through the Mini Mental Status Examination), time of recovery after the hemodialytic session (TIRD), disability though the determination of daily activities through the ADL (activities of daily living) and the IADL (instrumental activities of daily living), weight, height, BMI. In addition the following laboratory parameters were measured: haemoglobin, hematocrit, serum albumin, creatinine, urea, calcium, phosphorus, C-reactive protein, Interleukin-6 (IL-6), parathyroid hormone (PTH), vitamin D, fibrinogen, ferritin.
Results: A total of 124 patients were screened for study participation, Of these, 14 were excluded because of dialytic vintage <6 months, 6 for inability to answer to the questionnaires for deafness or reading problems and 4 for previous diagnosis of psychotic or neurological disorders. Forty three (43%) patients constituted the fatigued group and 57 (57%) the non-fatigued group. The age of fatigued patients was significantly higher than that of non-fatigued ones. The scores of Charlson Comorbidity Index, BDI and HARS and the TIRD were significantly higher in fatigued patients than in non-fatigued ones. Conversely, the scores of ADL, IADL and MMSE were significantly lower in fatigued than in not-fatigue ones. With regard to laboratory parameters, serum IL-6 levels (pg/ml) were significantly higher in the fatigued group (5.1±3.4) than in the non-fatigued one (1.6±1.5; p<0.001), whereas serum albumin and creatinine levels were significantly lower. At the univariate analysis, the score of the SF-36 Vitality subscale was correlated to age, dialytic age, Charlson comorbidity Index, BDI, HARS, MMSE, TIRD, ADL, IADL, serum urea, creatinine, albumin and IL-6 levels. At the multivariate analysis,BDI (correlation coefficient: -1.227+-0.372; p=0.003) and serum IL-6 levels (correlatin coefficient: -3.457; p=0.001)were independently associated to the score ofthe SF-36 Vitality subscale.
Conclusions: In summary, we found that fatigue was significantly associated with symptoms of depression and serum IL-6 levels iin end-stage renal disease patients receiving chronic hemodialysis. The findings of this exploratory analysis should help generate additional longitudinal studies to possibly demonstrate the causative role of chronic inflammation and depression in the onset of fatigue in end-stage renal patients receiving chronic hemodialysis.

MP548 CLINICAL AND LABORATORY FACTORS ASSOCIATED WITH FREQUENCY OF INTRADIALYTIC HYPOTENSION IN CHRONIC HEMODIALYSIS PATIENTS

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Introduction and Aims: Intradialytic hypotension (IDH) is a common complication of hemodialysis with an adverse effect on survival rates and quality of life. The aim of this study was to assess the influence of clinical and laboratory factors on IDH frequency.
Methods: We included 102 patients with CKD stage 5 receiving chronic hemodialysis for at least 12 months. We analyzed intradialytic blood pressure profiles, clinical and laboratory data. IDH episodes were defined according to EBPG criteria (2007). Frequency of IDH was estimated as a number of IDH episodes per month. All clinical and laboratory parameters were taken as average during a month of follow-up. Spearmen's correlation coefficients (rs) were calculated to assess the relationship between the frequency of IDH and clinical data.
Results: Average number of IDH episodes per month was 2.49±0,34. IDH frequency correlated negatively with: body mass index (rs= -0.234; p=0.039), average predialytic systolic (rs= -0.399; p<0.001) and diastolic (rs= -0.358; p=0.001) blood pressure, average postdialytic systolic (rs= -0.691; p<0.001) and diastolic (rs= -0.692; p<0.001) blood pressure and left ventricular mass index (rs= -0.302; p=0.023). IDH frequency correlated positively with: average serum potassium level (rs= 0.289; p=0.014), interdialytic weight gain/dry weight ratio (rs= 0.223; p=0.049) and ultrafiltration volume/dry weight ratio (rs=0.222, p=0.047).
Conclusions: Our study demonstrated clinical and laboratory factors associated with frequency of IDH in chronic hemodialysis patients. These findings should be used for further individualization of IDH prevention and treatment.

MP549 PREDICTORS OF INSULIN RESISTANCE AND THE IMPACT OF VITAMIN D SUPPLEMENT IN CHRONIC HEMODIALYSIS (HD) PATIENTS

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