Archives of Vascular Medicine

Volume - 1, Issue - 1

Case Report **Published Date:- 2017-12-18**

Hepato-Pulmonary syndrome and Porto-Pulmonary Hypertension: Rare combination cause of Hypoxemia in patient with end-stage renal failure on Hemodialysis and hepatitis C Induced Decompensated Cirrhosis

The case is that of 83 year-old African American man with hypertension, hepatitis C induced decompensated cirrhosis with ascites, end-stage renal disease (ESRD) on hemodialysis, fluid overload with peripheral edema and chronic hypotension. The patient was referred to the dialysis access center of Pittsburgh, PA for evaluation of his prolonged bleeding from the left upper arm brachial-basilic arterial-venous fistula (BBAVF).

Research Article **Published Date:- 2017-02-22**

The Impact of a Single Apheretic Procedure on Endothelial Function Assessed by Peripheral Arterial Tonometry and Endothelial Progenitor Cells

Introduction: Endothelial progenitor cells (EPC) are involved in vascular repair and proliferation, contributing to the long-term outcomes of apheretic treatment. Aim of this study was to investigate the relationships between endothelial function, assessed by levels of bone marrow-derived progenitor cells and endothelial response to hyperaemia, and clinical and biohumoral parameters in high vascular risk patients before, immediately after, 24-hours and 72 hours after a single lipid apheresis procedure.

Material and Methods: We evaluated lipid profile, endothelial function and endothelial progenitor cells before (T0), immediately after (T1), 24h after (T2) and 72h after (T3) a lipoprotein apheresis procedure, in 8 consecutive patients [Sex: 62.5% M; Age; 63.29(12), mean, (range) years] with a personal history of acute coronary syndrome, symptomatic peripheral arterial disease and elevated plasma levels of lipoprotein (a) [Lp(a)]. Patients were on regularly weekly or biweekly lipoprotein apheresis, and they were treated with the FDA-approved Heparin-induced Extracorporeal LDL Precipitation (H.E.L.P.) (Plasmat Futura, B.Braun, Melsungen, Germany) technique. PAT values were expressed as the natural logarithm (Ln-RHI, normal values?0.4) of the reactive hyperaemia index (RHI), which is the parameter automatically calculated by the device.

Results: We found a reduction in the natural logarithm of reactive hyperaemia index (Ln-RHI), assessed immediately after the procedure (0.57±0.21 vs 0.72± 0.29); difference between T2 and T0 was statistically significant (0.43±0.24 vs 0.72±0.29; p=0.006). Reduction in Ln-RHI values was documented in all patients, two subjects showing a Ln-RHI<0.4 at T1, and four at T2. At T3, PAT values were increased significantly (0.91±0.18) in comparison to T1 and T2, showing a median value higher than at T0. Cd34+/Kdr+ and Cd133+/Kdr+ showed a minimum increase in median values at T1, and a higher increase at T2, in comparison to baseline. Differences in Cd34+/133+/Kdr+ values at different times were not statistically significant. A significant reduction in circulating endothelial cells (CEC) count at T2 in comparison to T0 was found (12.00±8.85 vs 23.86±12.39; p=0.024).

Discussion: At 24h and 72h after procedures, we found an improvement in endothelial function, expressed by an increase in PAT values and EPC levels, and by a reduction in CEC.
