

Conclusion: The results suggest that treatment with a PAF-antagonist and monoclonal antibodies against ICAM-1 or especially PECAM-1 reduced the severity of I/R-associated intestinal dysfunction, associated with a diminish in systemic concentrations of IL-1 β , local leukocyte recruitment, and partly recovered protease inhibitor levels in plasma.

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Normothermic Pulsatile Oxygenated Rinse of Small Bowel Grafts Ameliorates Reperfusion Injury

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Aim of the Study: To ameliorate preservation-reperfusion injury of small bowel grafts using a normothermic pulsatile oxygenated rinse solution designed for the metabolic and vascular needs of the graft.

Methods: 36 WAG male rats (300 g) were used as donors. The aortic patch and the portal vein were isolated and cannulated. All the grafts were preserved in Collins solution during 6 hours. At the end of the period the grafts were randomized and assigned to 3 different groups ($n = 12$): a) Group A was immediately transplanted anastomosing the aortic patch to the left renal artery and the portal vein to the left renal vein of a nephrectomized recipient using a cuff technique. b) Group B was perfused with Ringer-Lactate during 25 minutes prior to the transplant using the same technique. c) Group C was perfused with a specially designed solution (UPV) during 25 minutes prior to transplant using the same technique as groups A and B. In those grafts perfused arterial pressure, arterial and portal flow, arterio-venous gasometries, and ionograms were measured during perfusion. Each of the groups was divided in two different subgroups ($n = 6$ in each one) survival rate after 7 days was measured, and histologic damage was graded (Chiu's scale) in post-operative days 1-3-5. ANOVA and Chis square test were used for statistical analysis.

Results: Grafts perfused with both solutions showed reactivating metabolism of the bowel (expressed as oxygen extraction, CO₂ production, pH variation), however UPV solution showed better micro circulatory parameters (mean arterial pressure,

outflow). Survival rate in group 1 was 45%, in group B 35%, and in group C 75%. Histological damage was markedly reduced in days 1 and 3 in UPV solution perfused grafts, and increased in group B if compared with transplanted and non-perfused animals.

Conclusions: Isolated normothermic reperfusion of small bowel grafts with specifically designed reperfusion solutions ameliorates reperfusion injury and improves survival of the grafts.

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Evidence of Free Radical Mediated Reactions after Coronary Angioplasty in Humans

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Introduction: There is very little data available on humans regarding restoration of coronary artery patency and Oxygen Derived Free Radicals (ODFRs) induced myocardial damage. The aim of this study was to determine whether there was evidence of ODFR mediated damage and oxidative stress in patients after Percutaneous Transluminal Coronary Angioplasty (PTCA).

Methods: In our study 13 patients (mean age 55.8 ± 9.6 years) undergoing PTCA were examined. Venous blood was sampled in the acute phase of the intervention (30 min before catheter insertion and 30 min after inflation) and at certain intervals up to 1 month (1, 2, 5, 30 days respectively). Samples were analysed for Malondialdehyde (MDA) as a marker of lipidperoxidation, and antioxidant enzymes (superoxide-dismutase, catalase). Cellular activation was characterised by measuring superoxide radical generating capacity of isolated leukocytes (PMN) and the aggregation rate of platelets.

Results: Blood MDA levels increased significantly at the end of the procedure compared with pre-PTCA values (from 82 ± 5.3 nmol/ml, to 98 ± 5.3 nmol/ml, $*p < 0.05$) and remained higher in the following days. There was a mild but not significant decrease of superoxide-dismutase and catalase activity 1, 2 days after PTCA, showing a characteristic elevation at the time of one month (superoxide-dismutase: $*p < 0.05$; catalase: $**p <$