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Vascular endothelial growth factor association with angiotensin 1 promotes improvement in ventricular function after ischemic cardiomyopathy induced in mini pigs.

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Abstract

PURPOSE: To investigate the safety and clinical, hemodynamic and tissue improvement ability in mini pigs undergoing cell and gene therapy for the treatment of acute myocardial infarction.

METHODS: Thirty-two mini pigs Br1 lineage, 12 months old, undergoing induction of acute myocardial infarction by occlusion of the diagonal branch of the paraconal coronary. They were divided into 4 groups: one control group and 3 treatment groups (cell therapy and gene cell therapy). Echocardiography reviews were performed on three occasions and histopathological analysis was performed after 4 weeks. Analysis of variance (ANOVA), Tukey and Wilcoxon tests, were performed.

RESULTS: Association of vascular endothelial growth factor (VEGF) with angiotensin1 (Ang1) presented satisfactory results in the improvement of ventricular function following ischemic cardiomyopathy in mini pigs when compared to the results of the other treated groups.

CONCLUSION: The therapy with VEGF and the combination of VEGF with Ang1, promoted recovered function of the myocardium, characterized by reduced akinetic area and induction of neovascularization.

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