



ENDOTHELIAL PROGENITOR CELLS IN ANCA-ASSOCIATED VASCULITIS

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BACKGROUND

Endothelial progenitor cells (EPC) are fundamental for vascular repair in health conditions. Endothelial colony-forming cells (ECFC) are derived from progenitor cells that circulates in peripheral blood and are an important source of autologous endothelial cells in diseases with a risk of ischemic events. The aim of this study was to evaluate the isolation and proliferation characteristics of EPCs in cell culture in AAV.

MATERIALS AND METHODS

Nineteen patients with the diagnosis of AAV and 15 health controls were enrolled in the study. Patients over 18 years of age, recent diagnosis or in follow-up without immunosuppression for at least 18 months were included. Patients taking prednisone at doses above 10mg/day were excluded. ECFC were determined by flow cytometry (FACS) and their proliferative capacity evaluated in cell culture.

RESULTS

The culture resulted in success for 53.3% of patients with granulomatosis with polyangiitis (GPA), 33.3% of patient with eosinophilic granulomatosis with polyangiitis and 53.3% of controls. The first colonies of ECFC of the AAV patients appeared on average on the 14th day and of the controls on 16th day. The main difference between the groups was a higher number of colonies in patients with GPA than in controls (4.8 and 1.6).

CONCLUSION

The ECFC of patients with AAV presented similar characteristics of the ECFC of healthy controls considering the success of isolation but a greater number of colonies formed. These findings reinforce the need for studies about the functional evaluation of EPC in patients with AAV. The ECFC may behave differently in patients with AAV with important implications in vascular repair.