



Potential Role of GM-CSF in the Progression of Intracranial Aneurysms.

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Introduction

Macrophages may play a central role in the inflammatory response leading to aneurysm rupture. We sought to determine whether Granulocyte-Monocyte Colony-Stimulating Factor (GM-CSF) plays a role in the progression of human intracranial aneurysms.

Methods

Specifically, we investigated whether there was a correlation between aneurysm size and the concentration of GM-CSF in the lumen of intracranial aneurysms. The concentrations of GM-CSF in blood samples drawn from the lumen of 15 human unruptured saccular intracranial aneurysms were compared. Correlation was assessed with Spearman's rank correlation.

Results

The mean plasma concentration of GM-CSF was significantly higher in aneurysms larger than 7 mm (30.1 ± 2.8 pg/ml) compared with aneurysms smaller than 7 mm (26.4 ± 2.4 pg/ml $p=0.02$).

There was a significant positive correlation between aneurysm size and the plasma concentration of GM-CSF (Spearman's $\rho=0.55$; $p=0.04$).

Conclusions

GM-CSF, through its stimulatory function on macrophages, may promote aneurysm progression and may be a possible therapeutic target.

Learning Objectives

The mean plasma concentration of GM-CSF was significantly higher in aneurysms larger than 7 mm (30.1 ± 2.8 pg/ml) compared with aneurysms smaller than 7 mm (26.4 ± 2.4 pg/ml $p=0.02$).

There was a significant positive correlation between aneurysm size and the plasma concentration of GM-CSF (Spearman's $\rho=0.55$; $p=0.04$). GM-CSF may promote aneurysm progression and may be a possible therapeutic target.

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