Antisense RNA to inducible nitric oxide synthase reduces cytokine-mediated brain endothelial cell eath.

許重義
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Abstract

We test whether inhibition of inducible nitric oxide synthase (iNOS) can exert a cytoprotective effect on cerebral endothelial cells upon stimulation by pro-inflammatory cytokines. Mouse brain endothelial cells were stably transfected to express an antisense RNA against iNOS driven by an endothelium-specific von Willebrand factor (vWF) promoter. Upon stimulation with tumor necrosis factor- (TNF-) plus interferon-┐ (IFN-┐), antisense transfectants showed less iNOS enzymatic activity with less nitric oxide (NO) when compared to the sense control cells. Correspondingly, the antisense cells showed a reduced LDH release and less cytosolic content of oligonucleosomes. These findings establish a cell-specific antisense strategy and confirm the cytotoxic role of iNOS expression in cultured cerebral endothelial cells.