Analysis by Real-Time PCR of Autophagy and Apoptosis in Neuronal Cells Infected with Chlamydia Pneumoniae

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Abstract

Introduction

We are pursuing the hypothesis that Chlamydia pneumoniale infection in neuronal cells alters autophagy and apoptosis gene regulation. These changes in gene regulation are consistent with alterations in apoptosis and autophagy as observed in late onset Alzheimer's disease.

Material & Methods

The SKN MC (ATCC) human neuroblastoma cell line was infected with ATCC’s AR 39 strain of Chlamydia pneumoniale at an MOI= 1 for 24 and 72 hrs. Cells were immunolabeled with the direct tag FITC chlamydia antibody 61 C 7 5 (fitzgerald).

Results

Conclusions

A Chlamydia pneumoniae infection in neuronal cells alters autophagy and apoptosis gene regulation. For both apoptosis and autophagy, there were marked differences between 24 and 72 hrs infection with a Chlamydia pneumoniale. These changes in gene regulation are consistent with alterations in apoptosis and autophagy as observed in late onset Alzheimer’s disease.

References