Effects of Aspirin on Proteins Implicated in Airway Remodeling in Human Lung Fibroblasts

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ABSTRACT

Aspirin is an inflammatory disease associated with chronic perturbations of pulmonary mechanics, morphology, and functionality. Established all is a receptor to correct systemic changes, and cilia to maintain a stable airflow environment, thereby increasing the number of fibroblasts and expression of cytokines that contribute to the development of chronic inflammatory disorders. The purpose of the present study was to examine the effects of aspirin on the expression of proteins implicated in airway remodeling in human lung fibroblasts. In this study, we investigated the expression of key proteins involved in airway remodeling. We used a cDNA microarray analysis to examine the expression of cell cycle, cell death, and immune response genes that are involved in airway remodeling. We investigated the expression of key proteins that are involved in the structure of the airways, namely, airway remodeling genes. We found that aspirin significantly reduced the expression of key proteins involved in airway remodeling. Our results suggest that aspirin has a potential therapeutic role in the treatment of airway remodeling.

INTRODUCTION

Airway remodeling is a complex process that involves an increase in airway smooth muscle mass, subepithelial fibrosis, and structural changes, which can lead to chronic airflow limitation (CAL) [1]. This process is characterized by increased airway smooth muscle mass, subepithelial fibrosis, and structural changes, which can lead to chronic airflow limitation (CAL) [1]. Airway remodeling is a complex process that involves an increase in airway smooth muscle mass, subepithelial fibrosis, and structural changes, which can lead to chronic airflow limitation (CAL) [1]. The purpose of this study was to investigate the expression of key proteins involved in airway remodeling. We used a cDNA microarray analysis to examine the expression of key proteins involved in airway remodeling. We found that aspirin significantly reduced the expression of key proteins involved in airway remodeling. This study suggests that aspirin has potential therapeutic role in the treatment of airway remodeling.

METHODS

Cell Culture

Normal and diseased human lung fibroblasts were obtained fromLonza (Walkersville, MD). Cells were cultured in medium containing 10% fetal bovine serum (FBS). Passages 2–5 were used.

Cell Lysates and Protein Quantification

10 μM RvD1 for 24 hours. RNA was then extracted from NHLF or DHLF, untreated or treated with ASA for 24 hrs. Cells were then harvested and lysed. Cell lysates were analyzed using a BCA assay to determine protein concentration.

RESULTS

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CONCLUSIONS

Airway remodeling is a complex process that involves an increase in airway smooth muscle mass, subepithelial fibrosis, and structural changes, which can lead to chronic airflow limitation (CAL) [1]. This process is characterized by increased airway smooth muscle mass, subepithelial fibrosis, and structural changes, which can lead to chronic airflow limitation (CAL) [1]. The purpose of this study was to investigate the expression of key proteins involved in airway remodeling. We used a cDNA microarray analysis to examine the expression of key proteins involved in airway remodeling. We found that aspirin significantly reduced the expression of key proteins involved in airway remodeling. This study suggests that aspirin has potential therapeutic role in the treatment of airway remodeling.

REFERENCES


