

Ekspresja chemokiny RANTES w fibroblastach pochodzących z polipów nosowych; samoistna i po stymulacji lipopolisacharydami (LPS) i fitohematoksyliną (PHA)

RANTES expression in nasal polyps fibroblasts; spontaneously and after stimulation with lipopolisaccharides (LPS) and phytohemagglutinin (PHA)

Beata Rostkowska-Nadolska, Lucyna Pośpiech, Wojciech Fortuna, Stanisław Szymaniec, Ryszard Międzybrodzki, Wojciech Gawron, Małgorzata Latocha

Summary

Introduction: According to the results of research carried out by a number of authors, one of the main mechanisms of the generation of polyps is local inflammatory processes accompanied by immune system disorders. It has recently been shown that a number of differentiation factors and inflammatory mediators may be involved in the growth of nasal polyps. RANTES is a eosinophil chemoattractant factor likely could play an important role in a chronic inflammatory response in the nasal tissue that subsequently leads to the development of nasal polyps. **Objective:** The objective of this study was detection of the chemokine RANTES in nasal polyps fibroblasts and researching influence of stimulation with lipopolisaccharides and phytohemagglutinin for RANTES expression in cultured nasal fibroblasts in vitro. **Methods:** Nasal polyps were obtained from 17 subjects (9 atopic and 8 nonatopic) during polypectomy. RANTES was measured by immunofluorescence method. **Results:** Intensive granular luminescence was observed in all cytoplasm of cells with the exception of nucleus. Immunoreactive RANTES was found to be present in 70% of cells. We not find increase percentage of positive RANTES fibroblasts after stimulation with lipopolisaccharides and phytohemagglutinin. RANTES expression was similar in the both: atopic and nonatopic polyps. **Conclusions:** This study demonstrates that cultured fibroblasts derived from both atopic and nonatopic patients release RANTES spontaneously and after stimulation with lipopolisaccharides and phytohemagglutinin. This observation and the finding that RANTES is present in nasal polyps fibroblasts suggest that this chemokine may be an important mediator of eosinophil in both atopic and nonatopic nasal polyposis. More research needs to expand on chemotactic factors such as RANTES and their interplay with other local cytokines.