

Zmiany potencjału proliferacyjnego fibroblastów pochodzących z polipów nosowych, w hodowlach *in vitro*, pod wpływem pochodnych wit. D

The change of proliferative potential of fibroblasts derived of nasal polyps *in vitro* cultured, influenced by derivatives vitamins D

Beata Rostkowska-Nadolska, Dariusz Kuśmierz, Małgorzata Kapral, Małgorzata Latocha, Leongina Świątkowska, Marcin Frączek

Summary

Introduction. Recurrent polyposis in the same patient resulting in the necessity of repeated surgeries forced to search for new pharmacological therapeutic methods. At present, locally acting glycocorticosteroids have the greatest value in the treatment of nasal polyposis. Polyps grow is connected with inflammation process and proliferation of fibroblasts. **Objective.** An evaluation of calcitriol and tacalcitol influence on proliferation of fibroblasts extracted from nasal polyps. **Material** consisted of 9 tissue samples coming from nasal polyps sampled during polypectomies. The testing was performed on the polyps fibroblasts after the sixth passage after the primary culture was established. Three days after the culture was started the cells were poured with nutrient medium without serum added and after further 24 hours was replaced by nutrient medium with takalcitol and calcitriol in the defined concentrations. The expression of the genes coding histone H3 was evaluated with the use of RT-PCR technique. **Results.** Tacalcitol and calcitriol *in vitro* decrease proliferation of fibroblasts sampled from nasal polyps. Inhibition is most effective for the concentration of 10⁻⁴M. Tacalcitol and calcitriol also inhibit level of histone H3 gene expression. **Conclusion.** Experimental data suggest tacalcitol to be more effective in the same concentration. Present studies may indicate the direction of further investigation in the potential pharmacological treatment on nasal polyps.