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The possible role of apoptosis in the pathogenesis of chronic tonsillitis and tonsillar hypertrophy

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Objectives: Waldeyer ring, forming the mucosal lymphoid tissue, is the first line of defense to the microorganisms in the respiratory tract. These microorganism causes recurrent infections of the lymphoid tissue. Chronic tonsilitis is the persistent inflammation of the tonsil that occurs due to recurrent, acute or subclinical infection. The recurrent and chronic inflammation of adenoid and palatine tonsil results in hypertrophy. Apoptosis provides an important balance between lymphocytes in lymphoid tissue. The aim of this study is to investigate the efficacy of apoptosis in the pathogenesis of tonsillar hypertrophy or atrophy.

Study design: 43 Patients who have chronic tonsilitis and tonsillar hypertrophy underwent tonsillectomy. Tonsils were evaluated and classified according to their grade (grade 1, grade 2, grade 3, grade 4). The specimens were examined immunohistochemically. Apoptotic cells were counted in 3 different microscopic fields and taken their average value for every microcompartment of tonsil. As a result of immunohistochemical staining, hypertrophic and non-hypertrophic tonsils were compared for their apoptotic cell rate.

Results and Conclusion: There is no difference in apoptosis rates between tonsil grades. In tonsillar microcompartments, apoptosis values were evaluated and we found no difference microcompartments. In the light of these findings, it was concluded that apoptosis has no effect on the pathogenesis of tonsillar hypertrophy and atrophy.

Biography

Onal M has completed her medical education at Hacettepe University Medical Faculty and she has completed her specialist training at Hacettepe University Medical Faculty Ear Nose Throat Department on 2014. She has more than 5 publications in various journals.

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