Incidence of Genotypes of Helicobacter Pylori in Oropharyngeal SCC

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Abstract— Helicobacter pylori (HP) is a well known gastric pathogen which has been recently detected in the oral cavity and saliva an also in oropharynx, especially in adenoid and tonsillar tissue (Wladayer´s ring tissue). Presented research has been focused on real-time PCR analyzing cagA and vacA genotypes of HP strains in tonsills and oropharyngeal cancer.

Methods

The study was approved by the appropriate ethics committee.The tissue specimens of tonsillar cancer or tonsils were collected using sterile instruments at the beginning of surgery.Biopsies were immersed into Remel MicrotestR M4RT and transported to the laboratory for real-time PCR analysis. TaqManTM hybridisation probes were developed for cagA , , vacA m1 and vacA m2, LC hybridization probes for vacA s1a, vacA s1b, vacA s2 specific sequence detection.

Findings

Majority of isolates lacking cagA gene coding CagA protein as the main factor of Helicobacter pylori pathogenicity as well as one type of vacA gene s1b m2 found in 17 from a total of 41 isolates (41.46 %) and in 66.66 % of tonsillar cancer.

Interpretation

Colonization of lymphoid tissue and malignancies in oropharyngeal area by different genotypes of Helicobacter pylori seems to be evident. Long-term survival of bacteria in deep tissue structures may influence immune system.

Index Terms— Helicobacter pylori, oropharyngeal cancer, genotype