

The possible role of diabetes in the etiology of laryngeal cancer

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Background & Aim: Laryngeal cancer and oral cancer are not always correlated with genetic mutations, HPV infection, smoking and alcohol abuse. In the absence of these risk factors, there is an increase on these cancers with a parallel increase of diabetes. The aim of this study is to verify if diabetes could be a risk factor for the laryngeal cancer.

Methods: A questionnaire was given to a group of 90 laryngectomees to verify if these patients have presented diabetes and xerostomia before surgery. In two groups, diabetics and healthy persons, the values of the salivary mucins and the pH were evaluated. The results were statistically analyzed using Fisher's exact test and Chi square test.

Results: Diabetes is a risk factor: $p=0.0445$ for laryngectomees male vs. control group. Xerostomia in laryngectomees male is a risk factor: $p=0.050$. The values of mucins and pH in diabetic group show significant difference: $p=0.05$ vs. control group.

Discussion: In all autoimmune diseases, a decrease in the value of pH and salivary flow consequently decreases the value of spinnbarkeit which measures the capacity of the mucous layer to adhere to the epithelium and alter the protective oral mucin layer. We find that diabetes is epidemiologically correlated with laryngeal cancer. In fact, only diabetes increases the concentration of salivary mucins with a formation of mucin layer even more reduced and so completely ineffective in protecting the mucosa.

Conclusions: The increase of mucin secretion in diabetes alters much the protective layer allowing the risk factors to promote cancer growth.

Biography

Roberto Menicagli has completed his PhD from Milan University, Italy and Postdoctoral studies in Biochemistry and Molecular Genetics at the Faculty of Biology at Milan University, Italy. He is the Director of Roma Biomed Research Lab, a private service organization. He has published more than 15 papers in reputed journals and is also the principal author of 4 international papers in the field of the environment. He has been serving as an Editorial Board Member of two magazines concerning medical sciences.

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