

Abstract

Selected Biomarkers of Inflammation in Patients with Head and Neck Cancer Depending on the Tumor Location [†]

Jarosław Nuskiewicz ^{1,*}, Marlena Budek ¹, Jolanta Czuczejko ^{2,3} and Karolina Szewczyk-Golec ¹

¹ Department of Medical Biology and Biochemistry, Faculty of Medicine, Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, 24 Karłowicza St., 85-092 Bydgoszcz, Poland

² Department of Psychiatry, Faculty of Medicine, Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, 9 M. Curie Skłodowskiej St., 85-094 Bydgoszcz, Poland

³ Department of Nuclear Medicine, Oncology Centre Prof. Franciszek Łukaszyk Memorial Hospital, Bydgoszcz, 2 dr I. Romanowskiej St., 85-796 Bydgoszcz, Poland

* Correspondence: jnuskiewicz@cm.umk.pl

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Abstract: Head and neck cancers (HNCs) are a group of neoplasms located in the area of the oral cavity, pharynx, larynx, paranasal sinuses, nasal cavity and salivary glands. HNCs are the sixth most common type of cancer in the Europe population. As in other neoplastic diseases, chronic inflammation occurs in HNC, affecting not only the location of the tumor, but also distant healthy tissues. In patients with HNC, changes in the levels of pro- and anti-inflammatory cytokines are observed. The aim of this study was to assess the level of interleukin 3 (IL-3), IL-4, IL-13, monocyte chemoattractant protein 1 (MCP-1) and MCP-2 in patients with HNC depending on the tumor localization. The study group consisted of 40 HNC patients divided into two groups according to the localization of the tumor: 20 subjects with cancer located in the area of the oral cavity (OC) and 20 subjects with cancer located in the area of pharynx and larynx (PL). Blood serum samples were used to perform the analyses. A value of $p < 0.05$ was considered as statistically significant. In the PL group, statistically significant higher concentrations of IL-13 and MCP-1 were observed. The level of IL-13 in the OC group was 3.99 ± 0.50 pg/mL, while in the PL group it was 5.79 ± 0.64 pg/mL. The MCP-1 concentration was 68.15 ± 7.06 pg/mL and 109.01 ± 10.76 pg/mL, respectively. There were no statistically significant differences in the levels of IL-3, IL-4 and MCP-2. This experiment indicates that IL-13 and MCP-1 may be potential biomarkers differentiating tumor localization in patients with HNC.



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Data Availability Statement: Data are available on request due to privacy/ethical restrictions.

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