NEXTFRONTIERS TOCURECANCER2022
DE 22 A 25/06 - 100% ONLINE

A.C.Camargo Cancer Center
Especializado em Vida

Gastrin-Releasing Peptide Receptor (GRPR) in head and neck cancer: Possible biomarker?

Danielly Olguins[1], Martina Lichtenfels[2], Camila Alves da Silva[1], Mariane da Cunha Jaeger[1], Luis Fernando Riveiro[1], Rafael Roesler[1], Caroline Brunetto de Farias[2], Gilberto Schwartsmann[1]

[1]Hospital de Clinicas de Porto Alegre, [2]Ziel Biosciences

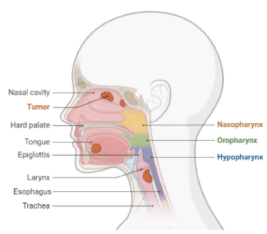
Introduction

Previous findings showed high Gastrin-Releasing Peptide Receptor (GRPR) in several cancers compared to normal tissue. However, few studies are available on the expression of GRPR in head and neck tumors.

Our study aims to verify GRPR expression in head and neck cancer samples using a specific antibody developed by Ziel Biosciences.

Methods

- The expression of GRPR protein was determined in 122 formalin-fixed and paraffin-embedded tumor samples through tissue microarray (TMA) using an antibody anti-GRPR developed by Ziel Biosciences;
- The most common head and neck tumors :
- 14% mouth
- 25.7% lerynx
- 48.3% esophagus



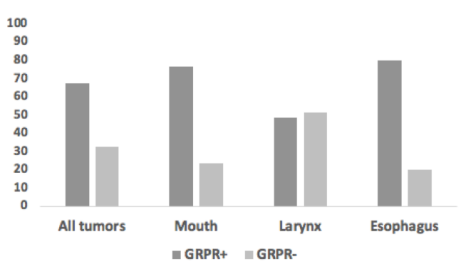
- 10 mucosa from cancer-free patients were used as control;
- The expression of GRPR was analysed based on the intensity and diffusion of stained cells through immunohistochemical analysis.

Results

- ✓ GRPR expression was increased in head and neck cancer (67%) compared to normal samples ($p < 0.0001$)
- ✓ None of the normal mucosa samples presented GRPR expression.
- ✓ TMA with GRPR immunostaining with specific antibofy demonstrated high sensitivity (67%), specificity (100%), and accuracy (70%) in detecting head and neck cancer

Tissue microarray (TMA)

- ✓ When comparing samples from mouth, larynx and esophagus was observed overexpression of GRPR in esophagus (80%) compared to larynx ($p < 0.01$) and also a tendency of higher GRPR expression in mouth (76.5%) ($p=0.07$)



Median patient's age was 58 years
Gender:
81.2% male
18.8% female

The patient's age and gender were not correlated to GRPR expression

Conclusions

Our results evidenced overexpression of GRPR in head and neck tumors, especially in mouth and esophagus cancer and confirm the efficacy of the anti-GRPR antibody developed by Ziel Biosciences to detect GRPR in head and neck tumors. These findings suggest the use of GRPR as a biomarker that might be used as a valuable detection method in immunohistochemistry for head and neck cancer

Contact

Ziel Biosciences: zielbiosciences.com

Caroline Brunetto de Farias: cbfarias@zielbiosciences.com

ziel biosciences